

CORNELL UNIVERSITY OFFICIAL PUBLICATION

FEBRUARY 24, 1954

Summer Session

ANNOUNCEMENT FOR SESSIONS OF
JULY 6 — AUGUST 14, 1954



SUMMER SESSION OFFICE

The office of the Summer Session is in Room 356, Edmund Ezra Day Hall; the telephone of the office and the Director is 4-3211, Extension 2924. The office will be open from 8 a.m. to 12 noon and 2 p.m. to 4 p.m., except Saturday, during the six-week Summer Session; on Saturday the office will close at 12 noon. Miss Anita Rynone is Secretary; Miss Alice Appleby, Information Assistant.

ADMINISTRATIVE BOARD

Sanford S. Atwood, Ph.D., Professor of Plant Breeding and Dean of the Graduate School

Lloyd H. Elliott, Ed.D., Associate Professor of Educational Administration and Director of the Summer Session

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CORNELL UNIVERSITY OFFICIAL PUBLICATION

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Summer Session

JULY 6 — AUGUST 14, 1954



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Calendar

REGULAR SIX-WEEK SESSION

- July 6, *Tuesday* Registration for the regular six-week Summer Session, 9 a.m. to 12 noon and 1:30 p.m. to 3:30 p.m. in Barton Hall. Fees are due for payment at the Treasurer's office, 260 Edmund Ezra Day Hall.
- July 7, *Wednesday* Instruction begins at the time and place announced for each course. Late registrants report to the Summer Session office to complete registration.
- July 10, *Saturday* Last day for making changes in registration, without payment of fee, at the Summer Session office, which closes at 12 noon.
- July 10, *Saturday* Classes regularly scheduled for Monday continue on this Saturday only.
- July 12, *Monday* Last day for payment of fees at the Treasurer's office, which closes at 4:30 p.m.
- August 13, *Friday* Final examinations begin; schedule on page 21.
- August 14, *Saturday* Summer Session ends, 4 p.m.

SPECIAL PROGRAMS

- June 14 to July 24 Summer Field School in Geology.
- June 21 to August 13 Special one-week seminars and workshops in Industrial and Labor Relations.
- June 28 to August 14 School of Hotel Administration Unit Courses.
- July 12 to July 30 Extension Service Summer School.
- August 1 to August 6 Summer Work Conference: School of Education.

Be sure to bring this Announcement with you for use on registration day and throughout the Summer Session.



General Information

THE SUMMER SESSION offers academic instruction for both graduates and undergraduates by members of the faculties of the Graduate School, of the Colleges of Arts and Sciences, Engineering, Agriculture, and Home Economics, and of the Schools of Education, Industrial and Labor Relations, and Hotel Administration.

This unification of the curricula and faculties of the several schools and colleges makes possible the adaptation of academic work to the special needs of summer students. Undergraduate courses are equivalent to required and elective collegiate courses leading to the baccalaureate. Advanced courses, seminars, and informal study, treating topics of concern to students with special interests, are designed with particular regard for what can satisfactorily be treated in a short term and in the summertime. The needs of teachers are met not only in the workshops, seminars, and professional courses in Education, but also in courses in a wide number of subject fields. A number of unit programs and special courses are offered for professional workers other than teachers.

All necessary facilities of the University are available to students registered in the Summer Session: libraries, classrooms, and laboratories; residence halls, dining rooms, and cafeterias; health services and medical care; counseling services; student union, chapel, playing fields, and recreational areas.

ADMISSION

The Summer Session's purpose is to place the facilities of the University at the disposal of persons who can use them to good advantage and for serious purposes during the summer period. Admission will not be granted to persons who are inadequately trained for the work they propose, or whose records in Cornell University or elsewhere are unsatisfactory. Nor will admission be granted to persons whose purposes seem inadequate or inappropriate or better served by other work at other institutions.

Admission of undergraduate or graduate students to the Summer Session establishes no priority with respect to admission to the regular terms. Students seeking admission to an undergraduate college in the fall should apply to the Director of Admissions, 233 Edmund Ezra Day Hall.

Students are eligible for admission to the Summer Session in three categories as follows:

UNDERGRADUATES....An undergraduate candidate for the Bachelor's degree, at Cornell University or elsewhere, is required to preregister for a program of courses totaling between five and seven credit hours, all of which are approved by the dean or other appropriate officer of his college for credit toward graduation. This preregistration, to be made by completing the undergraduate application form, is final and can be changed only by filing a new application. The special application form will be mailed on request.

Sophomore standing or above is required of undergraduates regularly attending institutions other than Cornell University. By definition, a student has achieved sophomore standing if he has completed one-fourth of the credit requirements for the Bachelor's degree before June 15, 1954.

June 22, 1954, is the closing date for admission of undergraduates.

GRADUATES....Any graduate of a recognized four-year college or normal school is eligible for admission to the Summer Session upon receipt by the Director of the Summer Session of a graduate application form. Graduate students are requested to preregister for a program of courses totaling from four to seven credit hours. This preregistration is made by completing the graduate application form and returning it to the Summer Session office by June 22, 1954. A graduate or special student may register as late as July 6, but is advised to select courses by June 22, in order to ensure a place in classes. A course program may be changed on registration day, July 6, in Barton Hall, if the student finds classes to which he can be admitted. The special application form will be mailed on request. *Admission to the Summer Session in this category does not constitute admission to the Graduate School of Cornell University as a candidate for an advanced degree.* See page 11 for information regarding admission to the Graduate School.

SPECIAL STUDENTS....Mature persons who are not candidates for an academic degree will be admitted to the Summer Session for courses which will help their vocational and personal development. Such persons should preregister by completing the "graduate and special students" application form, which will be mailed on request.

APPLICATION FOR ADMISSION....Application for admission to the Summer Session of 1954 must be made on a special form mailed by the Director of the Summer Session on request. In most cases the information called for on this form will be sufficient.

Registration coupons, necessary for registration in the Summer Session, will be mailed to the applicant after favorable action.

PROGRAM OF STUDY

Undergraduates are required to register for a program of between five and seven hours of credit. Approval by the student's dean is necessary for programs as heavy as eight credit hours, the maximum load. Such permission is usually granted only to those students with a high academic average.

Graduates and special students not enrolled in the Graduate School of Cornell University are required to register for at least four hours of credit and may not register for more than seven hours of credit except by permission of the Director.

Graduate students matriculated in the Graduate School of Cornell University may, upon the recommendation of their respective committee chairmen, register for as many as eight hours of credit. Four credit hours constitutes a minimum program for graduate students.

No student may receive credit for more than eight semester hours of work done in a single six-week Summer Session.

Special permission for registration in certain restricted courses, as noted in the course descriptions (pages 22-53), should be obtained, before filing the application form, by writing to the instructor named.

ACADEMIC CREDIT

All courses offered in the Summer Session are assigned appropriate hours of credit. Registration for a program of courses implies registration *for credit*. A student wishing to attend regularly a class for which he is not registered should obtain an auditor's permit (page 8).

CREDIT... There is, in general, no sharp distinction between undergraduate and graduate courses. In this Announcement each course is marked immediately after the title in one of three ways:

(U)... These courses are intended primarily for undergraduates. Students registered in the Graduate School of Cornell University will not receive credit for these courses toward an advanced degree unless such credit is specifically recommended by the committees in charge of their work.

(U,G)... These courses are offered both at the graduate and the undergraduate level. Graduate students who are candidates for advanced degrees or who wish certification for work done at the graduate level must indicate at the time of registration their intention to complete the course at the graduate level and must be prepared to do any additional work that may be required. Such students registered in "U,G" courses should consult with their instructors early in the session to see that the level is properly recorded.

(G)...These courses are intended primarily for students who are candidates for advanced degrees, for teachers, and for others who wish certification to accrediting agencies for work done at the graduate level. Undergraduates with adequate preparation may register for these courses only after receiving permission from the instructors in charge.

CREDIT TOWARD DEGREES AT CORNELL UNIVERSITY...A student matriculated in an undergraduate school or college of Cornell University will be admitted to the Summer Session only after the appropriate officer from the following list has approved and signed his application for admission.

College of Agriculture: Professor J. P. Hertel.

College of Architecture: Dean T. W. Mackesey or Professor J. A. Hartell.

College of Arts and Sciences: Associate Dean M. L. Hulse.

College of Home Economics: The student's counselor.

College of Engineering: *Chemical*, Professor C. C. Winding; *Civil*, Professor N. A. Christensen; *Electrical*, Professor H. G. Smith; *Mechanical*, Professor G. R. Hanselman.

School of Hotel Administration: Professor H. B. Meek.

School of Industrial and Labor Relations: Professor C. A. Hanson.

This approval will indicate that the school or college will accept credit in the stipulated courses as credit toward a degree.

CREDIT IN INSTITUTIONS OTHER THAN CORNELL UNIVERSITY...An undergraduate enrolled in another institution, before admission to the Summer Session, will submit as part of his application a program of courses approved for credit by an officer of the institution in which he is a candidate for a degree. When admitted, the student will be preregistered for those approved courses. At the end of the Session an official transcript of the Summer Session record will be sent to the institution. The transcript will show what courses have been taken, the amount of credit in semester hours, and the grades received.

GRADES...All grades are reported in a numerical scale from 0 to 100. If a student *for medical or other important reasons* must be absent from the last class meeting and cannot make up the work before the last day of instruction, he may request the instructor to report his grade as *Absent*, together with a conditional numerical grade which may be used as the final recorded mark if the course work is not completed by January 1, 1955. It is the student's responsibility to make such specific arrangements with his instructors when necessary.

No other grades, for instance, *Incomplete*, are given in the Summer Session.

The colleges of Cornell University regard the grade of 60 as the lowest passing grade.

REGISTRATION

Registration for the six-week Summer Session will take place on Tuesday, July 6, in Barton Hall. Each student's certificate of admission, which is included with the registration coupons, will give the hour of the day at which he will be admitted. Directions for registration procedure will be issued at the entrance. Students who for any reason have not received a certificate of admission will report to the Admissions table in Barton Hall after 9 a.m. Persons who fail to appear for registration in Barton Hall on July 6, during the scheduled registration hours, will be charged a fee of \$10 for late registration.

Graduate students who are candidates for degrees at institutions other than Cornell University, and who are planning to obtain credit toward these degrees by their Summer Session work, do *not* register in the Cornell Graduate School, but only in the six-week Summer Session. Before so registering they should arrange for the accrediting of this work by the institutions from which they plan to take their degrees. Other students who hold Bachelors' degrees but who are not candidates for advanced degrees will also register only in the six-week Summer Session.

Registration in the University is required for admission to any of the exercises of the Summer Session.

CHANGES OF REGISTRATION. . . . All changes of registration after Tuesday, July 6, must be made by appearing at the Summer Session office, 356 Edmund Ezra Day Hall, before 12 noon on July 10. A fee of \$10 will be charged for all changes of registration after 12 noon on July 10. When a change of registration involves enrollment in another course, the permission of the instructor of the new course is necessary.

An undergraduate whose program requires change on registration day should report to the Director and must have obtained approval of the change from an officer of the institution in which he is a degree candidate.

Changes in registration include cancellation of a course, change from one course to another, change in graduate or undergraduate level, addition of a course to a program, or change from credit to auditor's status in a course.

Changes in registration cannot be effected by notifying the instructor of a given course. Students must appear at the Summer Session office in order to make program changes.

AUDITORS. . . Admission to classrooms during the Summer Session is restricted to students registered for the Session. A student thus duly registered may occasionally visit any class; but if he wishes to attend regularly classes for which he is not registered, he must secure an auditor's permit. Such permits will be granted whenever the student can show a serious purpose in such attendance, if his program is light enough to allow the additional appointment. No student may receive more than two such permits. *Auditors do not take part in the work of the courses which they visit, and no record of such attendance is made.* Auditors' permits are not issued on registration day; they may be secured on Wednesday, July 7, and at any time thereafter at the Summer Session office.

WITHDRAWALS FROM THE SUMMER SESSION. . . See page 9 for information concerning withdrawal.

FEES

All fees are due and payable at the Treasurer's office in Edmund Ezra Day Hall on registration day, July 6. The last day for payment of fees without penalty is Monday, July 12. The Treasurer's office closes at 4:30 p.m.

TUITION. . . A student in the six-week Summer Session registered for four or more credit hours will pay tuition in the amount of \$125. Students registered for three credit hours or less will pay tuition at the rate of \$30 per credit hour. Tuition for unit courses is charged at the rate of \$25 per week, which includes a pro rata portion of the general fee. (Health and hospital services are not available to unit course registrants.)

FEES AND DEPOSITS. . . All six-week Summer Session students regardless of the number of hours carried, will pay, in addition to tuition, a general fee of \$20, which entitles them to health and infirmity services (see page 15), administration services, and student union membership. Fees for laboratories, field trips, and incidental expenses are charged in certain courses and are shown in the course descriptions. A student who desires to register after the regular registration day must pay a \$10 late registration fee. A student who wishes to make a change in program after the period established by the Director of the Summer Session must pay a \$10 fee. Special fees are charged for individual instruction in golf, music, tennis, and swimming.

REGISTRATION. . . On admission to the Graduate School, the applicant is required to pay the sum of \$30 within twenty days of notifica-

tion of admission. Eighteen dollars will be used to pay the matriculation fee; the other \$12 will be held on deposit in the Treasurer's office until official withdrawal or the granting of the degree, as a guaranty against outstanding bills.

WITHDRAWAL FROM THE SUMMER SESSION . . . A student may arrange for withdrawal at any time by canceling his registration *at the Summer Session office*, 356 Edmund Ezra Day Hall. In such cases, the Treasurer may refund a part of the tuition and general fee, or cancel a part of the obligation that the student has incurred for tuition, provided the reason for withdrawal is stated in writing and is satisfactory to the Treasurer and the Registrar. In such cases the student is required to pay 20 per cent of the term's tuition and general fee for each week or fraction of a week between the first registration day and the date of his certificate of withdrawal, unless the withdrawal is made before Friday, July 9.

OTHER REGULATIONS CONCERNING FEES . . . Any student, graduate or undergraduate, except as hereinafter provided, who fails to pay his tuition, fees, and other indebtedness, or, if entitled to free tuition fails to claim the same at the Treasurer's office and pay his fees within the time prescribed by the University, is thereby dropped from the University. When in his judgment the circumstances in a particular case so warrant, the Treasurer may allow an extension of time to complete payments. For such an extension, the student will be assessed a fee of \$2. A reinstatement fee of \$5 will be assessed any student who is permitted to continue or return to classes after being dropped from the University for default in payments. For reasons satisfactory to the Treasurer and the Registrar, which must be presented in writing, the above assessment may be waived in any individual case.

Any tuition fee or other fee may be changed by the Trustees to take effect at any time without previous notice.

CASHING OF CHECKS . . . The Treasurer of the University accepts checks in settlement of charges payable at his office, but a rule of the Board of Trustees forbids him to cash any credit instrument, even to the extent of accepting a check or draft in amount greater than the sum due and returning the excess in cash. Students are therefore advised to open an account in an Ithaca bank as soon as they arrive in town, or else to provide themselves with travelers' checks, drafts on New York City banks, money orders, or other forms of credit instrument such as a bank will cash in the ordinary course of business.

VETERANS

Veterans who plan to study under Veterans Administration educational benefits during the Summer Session should observe the following instructions.

PUBLIC LAW 346 AND 550 VETERANS....Veterans enrolling for the first time under educational benefits, or veterans whose last period of training was not at Cornell, must present a Certificate of Eligibility for the course of study they plan to pursue. Application for the certificate should be made to the local Veterans Administration Regional Office, or, in the case of veterans who have had previous training, to the office where their records are located.

Veterans enrolled and using benefits at Cornell during the spring term, 1954, may use their benefits during the Summer Session, providing there is no change of course or objective, by completing enrollment forms in the Treasurer's office. Veterans making a change of course or objective must apply to the Veterans Administration for approval of the change before the close of the spring term, 1954. Application forms are available at the Treasurer's office.

Teachers who were enrolled under Public Law 346 benefits at Cornell during the Summer Session, 1953, who have not been in training since that time, must bring with them a statement in duplicate from their school authorities to the effect that they were teaching during the school year of 1953-54.

A Public Law 346 veteran who fails to present the required papers or complete the necessary forms will be expected to pay tuition and fees, subject to such reimbursement as may eventually become due. Public Law 550 veterans pay tuition and fees at the regular time.

PUBLIC LAW 16 VETERANS....Veterans under this law must arrange for approval by the Veterans Administration prior to registration in the Summer Session.

All questions concerning eligibility for the Veterans Administration educational benefits should be directed to the nearest Veterans Administration Office.

THE GRADUATE SCHOOL

The Graduate School is an administrative unit entirely separate from the administration of the Summer Session. Only candidates for advanced degrees at Cornell University are registered in the Graduate School in the summertime. Students who take course work at the graduate level in the Summer Session but who are not candidates for an advanced degree at Cornell University have no connection with the Graduate School.

CREDIT FOR ADVANCED DEGREES... Summer Session credits may be used for fulfillment of requirements for the following advanced degrees, under regulations of the Faculty of the Graduate School:

- Master of Arts (M.A.)
- Master of Science (M.S.)
- Master of Education (M.Ed.)
- Master of Industrial and Labor Relations (M.I.L.R.)
- Doctor of Education (Ed.D.)
- Doctor of Philosophy (Ph.D.)

A normal program in the six-week Summer Session, approved in advance and reported as satisfactory by the Special Committee, is accepted as two-fifths of a residence unit, providing the candidate has registered in both the Summer Session and the Graduate School. Requirements for Masters' degrees may be completed solely in the Summer Sessions, if instruction in the chosen major and minor subjects is offered. Only two residence units (in exceptional instances, three) for study in the Summer Session may be accepted in fulfillment of requirements for the doctorate. In order to help a student become acquainted with the School and Faculty before entering candidacy, *the Faculty allows the transfer of one Cornell Summer Session of study earned prior to admission to candidacy.*

ADMISSION... Students intending to become candidates for an advanced degree at Cornell should write to the Dean of the Graduate School, 125 Edmund Ezra Day Hall, for application forms and for the *Announcement of the Graduate School*. Applications received before May 1 will be acted upon in time for the accepted candidate to register in the Graduate School on registration day, July 6. The Admissions Committee cannot give assurance that an application received after May 1 will receive the same consideration that it would receive if filed before this date.

REGISTRATION DEPOSIT... On admission to the Graduate School, the applicant is required to pay the sum of \$30 within twenty days of notification of admission. Eighteen dollars will be used to pay the matriculation fee; the other \$12 will be held on deposit in the Treasurer's office until official withdrawal or the granting of the degree, as a guaranty against outstanding bills.

REGISTRATION... *Students matriculated in the Graduate School must register in both the Summer Session and the Graduate School.* Full information and proper forms for registering in the Graduate School are to be obtained at the Graduate School table in Barton Hall on registration day. The registration must be completed within one

week of registration day. To register, each candidate must file a Statement of Courses blank, properly approved by his committee chairman. Each *new* candidate must file a Nomination of Committee blank.

Note: Such registration is regarded in the same fashion as registration for a regular semester and affects the deadlines for fulfillment of requirements. For instance, a new candidate must complete his first language requirement within one week of Summer Session registration day.

Candidates registered in the Summer Session who were not registered in the preceding spring term but who expect to register in a succeeding regular term for continuation of their candidacy must arrange with the Dean of the Graduate School for permission to register in the regular term.

COMPLETION OF REQUIREMENTS....Candidates for advanced degrees who expect to complete requirements and to take their final examinations at the end of the Summer Session should call at the office of the Graduate School not later than the third week of the Session for the necessary instructions and blanks.

CANDIDATES IN THE SCHOOL OF EDUCATION....Students interested in the degree of Master of Education (M.Ed.) should consult the *Announcement of the School of Education*, which will be sent upon request to Official Publication, Edmund Ezra Day Hall. The Faculty of the School of Education, functioning as a division of the Faculty of the Graduate School, has special jurisdiction over this degree.

LIVING ACCOMMODATIONS

Rooms are available to both graduate and undergraduate men and women in University-operated housing units, as well as off campus. A leaflet giving detailed information on both types of housing, *Residential Halls for Men and Women*, may be secured by writing to the Department of Residential Halls, Edmund Ezra Day Hall.

UNDERGRADUATE WOMEN....All undergraduate women registered in the 1954 Summer Session are required to live in Residential Halls for Women and to take their meals there. Unit V of Clara Dickson Hall will be in use for undergraduate housing, and there will be a uniform charge of \$151.80 for board, room, and an allowance of personal laundry for the six-week period.

GRADUATE WOMEN....Graduate women under twenty-one are required to live in Residential Halls for Women. Graduate women over twenty-one may make application for rooms in Residential Halls or may live in off-campus houses.

Risley Hall will be reserved for graduate women's housing. The rates will range from \$47.40 to \$56.40 for the six-week session, depending upon the desirability and location of the room, and will include room and an allowance of personal laundry only.

Unit VI of Clara Dickson Hall will be available for graduate women who are interested in arranging for board. A uniform rate of \$142.80 for six weeks will include room, twenty-one meals a week, and an allowance of personal laundry.

GRADUATE AND UNDERGRADUATE MEN... Single and double rooms in the Baker group of Residential Halls will be available to both groups of men. Such assignments are made in order of date of application. The rates range from \$28.50 to \$45.00 for the six-week session, depending upon the desirability and location of the accommodation, and will include room only.

SOCIAL REGULATIONS FOR WOMEN... A Head Resident, appointed by the Office of the Dean of Women, is located in a first-floor apartment of each unit of Clara Dickson Hall and of Risley Hall. Each Head Resident is responsible for the conduct and social life of the hall which she supervises and is glad to advise students in cases of illness and emergency, or to give them whatever information they wish concerning the University and town.

Both the undergraduate and graduate dormitories open at 7 a.m. daily. The undergraduate dormitory closes at 11:30 p.m. Sunday through Thursday, and at 12:30 a.m. Friday and Saturday; graduate dormitories close at 12 midnight Sunday through Thursday, and at 1 a.m. Friday and Saturday.

SOCIAL REGULATIONS FOR MEN... Insofar as practical, all men students are left to the regulation of their own affairs, subject to the University's general rules with regard to student conduct and within the jurisdiction of the Faculty Committee on Student Conduct. There are no prescribed closing hours for men's dormitories.

Student counselors are in residence in all men's housing units to advise students in cases of illness or emergency, or to give them whatever information they wish concerning the University or town.

OPENING-CLOSING DATES OF DORMITORIES... All Residential Halls will be open for occupancy Monday, July 5, at 8 a.m.; they will close at 2 p.m., Sunday, August 15. *Earlier or later occupancy will not be possible under any circumstances.*

APPLICATIONS FOR ROOMS... Applications for rooms in Residential Halls cannot be given consideration unless they are submitted on official application forms to the office of Residential Halls. Room ap-

plication forms are distributed *only* by the office of the Summer Session *after* admission has been approved, and each student will automatically receive one with his certificate of admission to the Summer Session.

DEPOSITS WITH APPLICATIONS....A \$5 room deposit check or money order, drawn to the order of Cornell University, must accompany each application for a room in any of the Residential Halls if the application is to receive consideration. This deposit is not applied on the residence charge. If the student occupies an assigned room for even a limited amount of time, the deposit is held until after the end of the Session to cover the return of keys and any damage to building or furniture other than that occasioned by normal use, and to ensure completion of the lease.

REFUNDS OF DEPOSITS AFTER WITHDRAWAL OF ROOM APPLICATIONS....The \$5 room deposit will be refunded if the applicant files with the Director of Residential Halls written intention to withdraw the application for assignment by June 15, or within two weeks of applications dated June 2 or later. No \$5 room deposit will be refunded on cancellations received on or after the day of registration.

OFF-CAMPUS HOUSING....The Off-Campus Housing Office in Edmund Ezra Day Hall is maintained by the Department of Residential Halls. This office is a bureau of information only, maintaining files of voluntarily listed accommodations for the use of students who call at the office. Such lists cannot be mailed to prospective students.

Students wishing to sublet houses or apartments off campus are advised to arrive in Ithaca in advance of registration in order to secure such quarters. Rentals of sublet houses and apartments for the Summer Session range from \$60 to \$125 per month.

There is normally an adequate supply of rooms available in off-campus locations for the Summer Session. These rooms vary considerably in comfort, convenience, and safety. Before leasing a room, careful consideration should be given such details as distance from campus, nearness to eating places, price, ventilation, sanitation, furnishings, and fire escapes. Arrival in Ithaca a few days in advance of registration day will assure students of a better selection of off-campus rooms. It is expected that in 1954 rentals will range from \$5 to \$10 weekly.

DINING ROOMS AND CAFETERIAS....The dining facilities of Willard Straight Hall and the cafeteria in Martha Van Rensselaer Hall are open to both men and women students. Board may be obtained in these places, or in cafeterias, dining rooms, and restaurants near the campus, at approximately \$1.75 to \$2.25 a day.

COST OF LIVING. . . . An estimate of the cost of living in Ithaca in the summer can be made by consulting the figures given in the preceding paragraphs. In private houses rentals vary according to the location. Rooms are rented with the understanding that they will be occupied for the entire Session unless both parties agree otherwise.

HEALTH SERVICES

The facilities of the Student Medical Clinic, 5 Central Avenue, are available to all students registered in the six-week Summer Session.

Clinic Hours

| | |
|-----------------------|------------------|
| Monday through Friday | 9 a.m.-4:30 p.m. |
| Saturday | 9 a.m.-12 noon |
| Sunday | 10-11 a.m. |

(Physicians are not on duty from 12 noon until 2 p.m. A nurse will be in attendance during those hours.)

AFTER CLINIC HOURS. . . . In the event of serious illness or accident when the Clinic is closed, students may go directly to the Tompkins County Memorial Hospital, Quarry Street. This service is not intended for conditions that could have been treated at the Clinic during the regular Clinic hours noted above.

EMERGENCY SERVICE. . . . A doctor is always available for calls of an emergency nature when an accident has occurred or when the student is too ill to come to the Clinic or the Hospital. (In the women's dormitories these calls should be made by the Head Resident whenever possible.) Telephone calls for this service should be made through the Cornell Operator or the Medical Clinic, Ithaca 4-3211, Ext. 4518, when the Clinic is open, or Ithaca 2747 after Clinic hours. This service is not designed to care for students in their rooms. A charge of \$3 in the daytime and \$5 at night is made for these calls.

The Summer Session health fee entitles students to the following services:

- (1) Unlimited visits to the Student Medical Clinic, 5 Central Avenue;
- (2) Hospitalization with medical care for two days at the Tompkins County Memorial Hospital; a per diem charge of \$10 is made if hospitalization extends beyond two days;
- (3) Emergency surgical care. This is defined as initial surgical procedures which are necessary for the immediate welfare and safety of the patient.

If a student elects to consult a private physician, the cost of this service is not covered by the health fee.

COUNSELING SERVICES

The office of the Dean of Men and Dean of Women is on the first floor of Edmund Ezra Day Hall. This office maintains the following services:

INDIVIDUAL COUNSELING. . . A trained guidance and counseling staff serves students in personal, educational, vocational, and social areas.

TESTING. . . In cooperation with the University Testing Service, appropriate tests will be administered if, in the counseling process, a desire for them is expressed.

PART-TIME EMPLOYMENT OFFICE. . . This office lists part-time jobs that are available, and students interested in working should register upon arrival. Income from the type of part-time work available in the summer is nominal.

COUNSELING FOR FOREIGN STUDENTS. . . The Counselor to Foreign Students is concerned for all students from other countries. It is suggested that all foreign students write to him before coming to Ithaca and call upon him soon after arrival.

LIBRARIES

The University libraries comprise the general library of the University, the Mann Library of Agriculture and Home Economics, the Library of the Agricultural Experiment Station at Geneva, the Architecture Library, the Business and Public Administration Library, the Engineering Library, the Library of the School of Industrial and Labor Relations, the Law Library, and the Veterinary Library.

In addition there are the following special departmental libraries and laboratory collections: Agronomy, Animal Husbandry, Animal Nutrition, Barnes Hall, Botany, Browsing, Chemical Engineering, Chemistry, Conservation, Dairy Industry, Entomology, Geology, Goldwin Smith, Hotel, Mathematics, Military, Music, Nature Study, Nutrition, Physics, Plant Breeding, Plant Pathology, Poultry, Regional History, and Zoology.

The usual hours of opening for the libraries during the Summer Session are 7:50 a.m. to 6 p.m. on all weekdays except Saturday, when the libraries close at 1 p.m. Certain exceptions, especially in the departmental libraries and laboratory collections, may prevail.

The general collection of reference books and documents, the chief bibliographical publications, and the principal series of academy and learned society publications are located in the University Library.

Specialized reference materials will be found in the various college and departmental libraries. The Reference Department of the University Library and the librarians of the college, school, and departmental libraries are prepared to assist students in the effective use of the libraries and in the location of research materials.

The total library resources on the Ithaca campus exceed 1,600,000 volumes. The number of periodicals, transactions, and other serials currently received is over 5,000.

In the course of their development the libraries have received and have built up special collections, some of the most significant being: Architecture, American History, Slavery, Reformation, English and French Revolutions, American Civil War, History of Superstition, Spinoza, Dante, Petrarch, Rhaeto-Romanic, Egyptology and Assyriology, China, Dramatic Literature, Freemasonry, Legal Trials, Entomology, Botany, Zoology, History of Science, Icelandic, and Regional History.

Cards of admission to the stacks and to the White Historical Library are issued to graduate students for the purpose of consultation and research. A limited number of stalls and study spaces are available to graduate students upon application. The privilege of borrowing books for home use is granted to all students who comply with the library regulations.

SPECIAL REGULATIONS

CONDUCT AND SCHOLARSHIP. . . The Summer Session is administered under the general regulations governing conduct and scholarship which apply to all sessions of the University. Students are expected to familiarize themselves with dormitory and other rules and to abide by them. A statement of the University rule governing student conduct follows:

"A student is expected to show both within and without the University unflinching respect for order, morality, personal honor, and the rights of others. The authority to administer this rule and to impose penalties for its violation is vested in the University Committee on Student Conduct. The rule is construed as applicable at all times, in all places, to all students of the University."

AUTOMOBILE REGULATIONS. . . Because of local traffic and parking conditions it is necessary to require registration of both motor vehicles and their drivers during the Summer Session as well as during the academic year. Each student who maintains or operates a motor-driven vehicle in or about Ithaca during the Summer Session must do the following: (1) register with the Safety Division Office, Edmund Ezra

Day Hall, at the time of Summer Session registration, by paying a fee of \$1 and displaying, as directed, a registration sticker; (2) if under twenty-one years of age, have written consent of his parent or guardian; (3) produce evidence that he may drive in New York State and that the vehicle may be driven there; (4) produce evidence that the vehicle is insured at the standard minima of \$10,000-\$20,000-\$5,000. Motorcycles must be registered but may not be used on the campus during class hours. Trailers as family living units are not allowed on any University property. Campus parking during class hours is restricted to certain areas.

PROGRAM OF EXTRACURRICULAR ACTIVITIES

The Summer Session, in cooperation with departments and agencies of the University, arranges a balanced extracurricular program of public events and recreation designed to enrich the campus experience of its students, especially those who are not at the University during the winter.

THE WEEKLY CALENDAR AND ANNOUNCEMENTS.... A weekly calendar, issued and posted on each Saturday of the Summer Session, contains not only all official notices but details of public events and also interesting news about special activities on the campus. Copies may be obtained without charge at the desk in Willard Straight Hall, at the Summer Session office, and in the Home Economics Cafeteria. Students are advised to secure copies regularly.

LECTURES.... Public lectures, open to all Summer Session students, are given on selected Wednesday evenings of the Session. Both non-resident lecturers and members of the Faculty take part in the series, and the subjects are chosen for their general interest and timeliness. In 1953, the lecturers and their topics were:

Dr. Alfred S. Romer, Director, Museum of Comparative Zoology, Harvard University: "Redbeds Fossils and the Evolution of Land Animals."

Dr. Mario Einaudi, Professor of Government, Cornell University: "Europe after Stalin."

Dr. George H. Healey, Professor of English, Cornell University: "Andrew D. White and His Diaries."

Mr. Frank Warner, President, New York Folklore Society: "Folk Songs of the Eastern Seaboard."

INFORMAL PROGRAMS.... On Sunday evenings in the Browsing Library at Willard Straight Hall, members of the Faculty present informal talks on topics of current or special interest, with discussion following.

SAGE CHAPEL...Religious services are conducted in Sage Chapel throughout the academic year by clergymen of various religious denominations. There will be services in the Chapel on five Sundays during the Summer Session, July 11 to August 8, inclusive.

CONCERTS...A series of Thursday evening concerts is given, open without charge to students in the Summer Session.

RECORDED MUSIC...Each Wednesday evening a concert of recorded music is broadcast on the Library Slope. In inclement weather, the concert is presented in the Music Room of Willard Straight Hall. Each Saturday evening a program of recorded music is broadcast in the Music Room.

RECREATIONAL FOLK AND SQUARE DANCING...For students and Faculty members on Monday evenings. An instructor is present.

SUMMER THEATRE...Performances are given by the Summer Players on Friday and Saturday evenings; admission is charged. In 1953, the series included: "The Autumn Garden," by Lillian Hellman; "Overruled," by George Bernard Shaw, and "Master Pierre Patelin," a medieval farce; and "The Circle," by W. Somerset Maugham.

The Summer Session productions of the University Theatre are under the general direction of Professors McCalmon, Stainton, and Albright, assisted by other members of the direction staff. Regularly enrolled members of the classes in Speech and Drama may compete for places in the casts and production staffs; detailed announcements will be made in the various classes.

FILMS...Noteworthy European and American films are presented by the University Theatre during the Summer Session; admission is charged. In 1953, the following films were shown: "Brief Encounter," "Beauty and the Beast," "The Bank Dick," "The Stars Look Down," "Edward and Caroline," and "Stagecoach."

WILLARD STRAIGHT HALL...The student union of Cornell University provides meal service, and snacks for late afternoon and evening service, lounges for men and women, rooms for student meetings, for games, and for dancing, the University Theatre, a billiards and games room, a barber shop for men, a browsing library well stocked with books of general interest, a music room, and an art room. On the upper floors of the Hall are sleeping rooms used principally by parents and guests of students, by alumni, and by guests of the University.

The Board of Managers of Willard Straight Hall arranges for dances, open houses, games, art exhibits, and other recreation and entertainment.

Willard Straight Hall is for the use of members of the University community; but guests of members may secure guest cards for limited periods upon application to the Director of the Hall.

SPORTS. . . Tennis courts, conveniently located about the campus, are available for the use of Summer Session students, and an 18-hole golf course is operated by the University. A gorge at one end of Beebe Lake on the campus forms a natural swimming pool, where two guards are on duty every day of the Session from 1 to 6 p.m.

Private lessons in tennis, golf, and swimming are offered by members of the Department of Physical Education.

Tennis. Hours to be arranged upon registration at Barton Hall on July 6. Eight lessons and two lectures. Fee, \$15.

Golf. Hours to be arranged. Call Mr. Hall at the University Golf Course, Ext. 4411.

Swimming. Hours to be arranged. See Mr. Staley at Beebe Lake or call Ithaca 4-1526.

For more detailed information, address Mr. R. J. Kane, Director of Athletics, Schoellkopf Building.

An extracurricular course in equitation is also offered. Address inquiries about fees and hours to the Director of the Equitation Course, Summer Session, BARTON HALL.

Curriculum

COURSES OF INSTRUCTION. . . . The listing is alphabetically by departmental subheadings under general fields of instruction. For offerings in particular subjects, consult the Index. Because of demands that may be placed upon the instructing staff, it may be necessary to substitute instructors for the ones named in the course descriptions. *The Director reserves the right to cancel any course for which, through unforeseen circumstances, satisfactory instruction cannot be provided.*

UNIT COURSES. . . . Unit courses, less than six weeks in length, are indicated by a *u* following the course number, and their dates are given in the descriptions.

COURSES WITH FEES ATTACHED. . . . Courses requiring laboratory or other fees are marked by asterisks.

CLASS SCHEDULES. . . . In most courses of instruction, classes will meet five times a week, on each weekday except Saturday. Class periods begin on the hour, unless otherwise indicated, and are fifty minutes in length. Laboratory periods are of various lengths, as indicated in the descriptions of courses which include laboratory work.

ROOM SCHEDULES. . . . The meeting places of courses are given in the course descriptions. Any changes in room assignments will be found in a supplementary announcement which will be distributed to students on registration day.

SCHEDULE OF EXAMINATIONS. . . . With a few exceptions, examinations will be held on Friday, August 13, and Saturday, August 14, at the hours indicated by the schedule below; in the exceptional cases, the examination will be held on Thursday, August 12, at 2. The usual classrooms will be used unless a change is announced by the instructor.

In courses which meet for more than one hour daily, the examination period is determined by the first hour at which they meet. For example, Economics 101 meets daily at 10 and at 11; the examination will be held on Friday at 10:30. In courses which include both lecture and laboratory periods, the examination period is determined by the lecture hour. In courses in which no examination is to be given, an announcement to that effect will be made by the instructor; in such cases the last meeting of each course will be held in the examination period for that course.

Examinations will be held as follows:

- 8 o'clock classes, Friday at 8.
- 9 o'clock classes, Saturday at 8.
- 10 o'clock classes, Friday at 10:30.
- 11 o'clock classes, Saturday at 10:30.
- 12 o'clock classes, Friday at 2.
- Afternoon classes, Saturday at 2.

AGRICULTURE

AGRICULTURAL ECONOMICS

Ag.Ec. 115u. *FARM PRICES AND PRICE POLICIES*. (U,G) 2 hours credit. July 6-July 23. M T W Th F 8-10. Warren 201. Mr. EARLE.

A review of the history of prices of farm products and a discussion of the important factors affecting them. Consideration will also be given to the relationship between price movements and other indexes of economic conditions. Federal farm price programs suggested or enacted are analyzed.

Ag.Ec. 143u. *MARKETING MILK AND DAIRY PRODUCTS*. (U,G) 2 hours credit. July 26-August 14. M T W Th F 8-10. Warren 201. Mr. STORY.

This course is designed primarily for county extension workers, vocational agriculture teachers, and others with agricultural training who work with dairy farmers. The marketing system, marketing organizations, principles and methods of pricing, and the federal and state marketing order programs will be reviewed. Special attention will be given current national, regional, and individual market problems.

AGRICULTURAL ENGINEERING

*Ag.En. 162u. *TEACHING TRACTOR PREVENTATIVE MAINTENANCE*. (U,G) 2 hours credit. July 6-July 23; July 26-August 14. Lectures, M T W Th F 10. Laboratory, T Th 1-4:30. Agricultural Engineering Teaching Laboratory. Mr. FOSS.

This course is designed to assist teachers of vocational agriculture in presenting the subject of preventative maintenance of farm tractors to their pupils. Opportunity is given in the laboratory to do those tasks on used tractors, such as flushing the cooling system, checking ignition, servicing the air cleaner and oil filter, etc., that are recommended for the high school program. Lectures provide related information and describe tools and materials, and methods of teaching. Text: Johnson and Hollenberg, *Servicing and Maintaining Farm Tractors*. Laboratory fee, \$3.

*Ag. En. 170. *HANDICRAFT FOR TEACHERS*. (U,G) 2 hours credit. Lectures and laboratories, M W F 1:30-4:30. Agricultural Engineering Teaching Laboratory. Mr. FOSS.

This course is designed to acquaint the teacher with handicraft work suitable for both classroom and extracurricular activities. Opportunity is given in the laboratory to work with wood, art metal, ornamental iron, metal casting, and plastics, with and without special tools. Developing skills is a primary object. Special effort is made to show how handicraft can be started on a limited budget and expanded as the need arises. Laboratory fee, \$5.

AGRONOMY

*Agron. 105u. *SOIL AND CROP MANAGEMENT*. (U,G) 1 hour credit. *July 6-July 23; July 26-August 14*. Prerequisite, Agronomy I and II or equivalent. (Consent of instructor.) Lectures, M T W Th F 9. One five-hour laboratory to be arranged. Caldwell 143. Mr. ALDRICH.

Basic principles of soil management and field crop production and their application to the solution of practical farm problems. Rotations, maintenance of soil productivity, and conservation of crops will be stressed. Field trips will be scheduled. Designed to meet the needs of county agricultural agents, vocational agriculture teachers, and others with similar interests. Laboratory fee, \$3. Cost of transportation on field trips will be assessed if necessary.

ANIMAL HUSBANDRY

An.Hus. 151u. *RECENT ADVANCES IN LIVESTOCK PRODUCTION*. (U,G) 1 hour credit. *July 6-July 23; July 26-August 14*. Lectures, M T W Th F 8. Wing C. Mr. HANSEL.

A presentation and discussion of recent developments in animal nutrition and animal breeding, with special emphasis on sterility problems in dairy cattle.

BIOLOGICAL SCIENCES

BACTERIOLOGY

*Bact. 1. *GENERAL BACTERIOLOGY*. (U,G) 2 or 4 hours credit. Lectures, M T W Th F 1:40, Stocking 119. Laboratory, M T W Th F 2:30-4:30, Stocking 301. Mr. VANDEMARK.

An introductory course giving a general survey of the field of bacteriology, together with the fundamentals essential to further work in the subject. Laboratory fee, \$10, for those seeking four hours credit.

BIOCHEMISTRY

Bioch. 101. *GENERAL BIOCHEMISTRY*. (U,G) 4 hours credit. Prerequisite, organic chemistry. Lectures, M T W Th F 8-10. Savage 145. Mr. NEAL.

Discussion of the chemistry of plant and animal substances and the reactions occurring in biological systems.

*Bioch. 102. *GENERAL BIOCHEMISTRY*. (U,G) 2 hours credit. Prerequisite, quantitative analysis, and parallel, Course 101. Laboratory, M T W Th F 10-12:30. Savage 230. Mr. NEAL.

Laboratory practice with plant and animal materials and the experimental study of their properties. Laboratory fee, \$15.

BIOLOGY

*Biol. 5. *LABORATORY METHODS IN BIOLOGY*. (U,G) 3 hours credit. Prerequisite, an introductory course in biology, botany, or zoology. Lecture and laboratory, M T W Th F 8-10:30. Roberts 306. Mr. UHLER.

For students who intend to teach or to follow some phase of biology as a profession. Subjects covered: collection, preservation, and storage of materials; the preparation of bird and mammal study skins; injection of blood vessels; clearing and staining small vertebrates; protozoological methods, and the preparation and staining of smears, whole mounts, and sectional materials. Laboratory fee, \$7.50.

*Biol. 307. *SPECIAL PROBLEMS IN BIOLOGY*. (U,G) Credit and hours to be arranged. Mr. UHLER.

This course may be elected by qualified persons with the permission of the instructor under whom the work is done. Laboratory fee, variable according to the nature of the problem.

BOTANY

*Bot. 31. *PLANT PHYSIOLOGY*. (U,G) 4 hours credit. Prerequisite, General Botany or Biology, and Elementary Chemistry. Lectures, M T W Th F 9, Plant Science 141; laboratory, M T W Th F 10-12, Plant Science 227. Instructor to be announced.

This course is designed to acquaint the student with the important life processes of plants. Topics such as water-relations, photosynthesis, translocation, digestion, respiration, mineral nutrition, and growth relations are studied in some detail, and particular emphasis is placed, both in laboratory and in classrooms, on discussion of the principles and their applications to living plants. Laboratory fee, \$5.

CONSERVATION

*Cons. 1. *CONSERVATION OF WILDLIFE*. (U,G) 2 or 3 hours credit. M T W Th F 8. Fernow 122. Field trips by appointment for those seeking 3 credit hours. Mr. SWANSON.

The wildlife resources of North America, their importance in our economic and cultural life; the history of wildlife conservation, and the policies and activities of state and federal wildlife agencies. Fee, \$5 for those seeking 3 credit hours.

*Cons. 3. *CONSERVATION OF NATURAL RESOURCES*. (U,G) 2 or 3 hours credit. M T W Th F 11. Fernow 122. Field trips by appointment for those seeking 3 credit hours. Mr. SWANSON.

The natural-resource problems of the United States; natural resources in national welfare; the conservation movement; public land policies; natural resources of major importance; their use and exploitation; present inventories; problems of the immediate and long-range future; essential points in a national conservation program. Fee, \$5 for those seeking 3 credit hours.

*Cons. 8. *ELEMENTARY TAXONOMY AND NATURAL HISTORY OF THE VERTEBRATES*. (U,G) 4 hours credit. Prerequisite, general zoology or biology. Lectures, M T W Th 1:40-2:30. Laboratory and field work, M T W Th 2:30-5:30. Fernow 14. Mr. HAMILTON.

Lectures on fish, amphibians, reptiles, and mammals; their habits, life histories, coloration, behavior, reproduction, and adaptations, together with their classification, nomenclature, characters, and relationships. Laboratory study of the parts employed in the classification of these groups with special training on the identification of the vertebrates of eastern United States. Field work is partly to give practice in field observations and in ready identification of local vertebrates in their natural environment and to introduce ecological methods. Fee, \$4.50.

*Cons. 25. *MAMMALOLOGY*. (U,G) 2 hours credit. Prerequisite, Course 8 or permission of instructor. Lectures, F 9 and 1:40-2:30. Laboratory, F 10-12 and 2:30-5:30. Fernow 14. Mr. HAMILTON.

Principal phases of mammalian life; origin, distribution, habits, and literature. Laboratory periods are devoted to methods of field collecting, census taking, life-history studies, preparation of skins and skeletons, and identification of North American species. Fee, \$3.

Cons. 400-405. *RESEARCH PROBLEMS*. (U,G) Credit and hours to be arranged. Prerequisite, adequate preparation and permission of instructor.

401. *HERPETOLOGY*. Mr. HAMILTON.

403. *MAMMALOGY*. Mr. HAMILTON.

405. *WILDLIFE MANAGEMENT*. Mr. SWANSON.

FLORICULTURE AND ORNAMENTAL HORTICULTURE

*Flor. 12. *HERBACEOUS PLANT MATERIALS*. (U,G) 3 hours credit. Lectures, M T W Th 8, Plant Science 37; laboratory, M W 2-5, Plant Science 15. Mr. LEE.

A study of the ornamental herbaceous plants used in landscape and garden plantings. Emphasis is placed on the identification, uses, and culture of annuals and summer flowering perennials. Laboratory fee, \$2.

GENETICS

Genet. 1. *HEREDITY AND EUGENICS*. (U,G) 2 hours credit. Given in alternate years. Prerequisite, a beginning course in biological science. M T W Th F 8. Plant Science 141. Mr. EVERETT.

An introduction to the laws of heredity, a survey of heritable characters in man, and discussions of the relationship between heredity in man and social problems. This course is intended primarily for students of all fields of scholarly endeavor who have not previously had a college course in genetics and who wish to obtain a knowledge of heredity, especially as applied to man.

(Genet. 101. *GENERAL GENETICS*. Tentatively scheduled for the 1955 Summer Session.)

ZOOLOGY

*Zool. 211-212. *COMPARATIVE ANATOMY OF THE VERTEBRATES*. (U, G) 6 hours credit. Prerequisite, Introductory Zoology or Biology. M T W Th F 8-1. Stimson G-25 and 310. This course is the equivalent of Zoology 211-212. Mr. GILBERT.

A thorough study and dissection of representative vertebrate types, including a fish, amphibian, reptile, bird, and mammal, together with demonstrations on species other than the types dissected. Intended to give students an evolutionary background for the study and appreciation of the structure of higher vertebrates, including man. Laboratory fee, \$25.

EDUCATION

ADMINISTRATION AND SUPERVISION

Educ. 219. *SEMINAR IN PERSONNEL ADMINISTRATION IN EDUCATIONAL INSTITUTIONS*. (G) 2 hours credit. M T W Th F 9. Stone 201. Mr. WINSOR.

A study of the problems of human relations in educational institutions. The methods and principles of recruitment, selection, placement, maintenance, organization, and government of staff and employees are analyzed.

Educ. 243. *PROCEDURES AND TECHNIQUES IN SUPERVISION*. (G) 2 hours credit. M T W Th F 9. Comstock 145. Miss COOKE.

Designed for superintendents, supervisors, and principals; inexperienced students admitted only by permission. A consideration of the nature and purpose of supervision; the improvement of the learning-teaching process; skill in observations; analysis of methods; relationships between general and specific objectives; selection, analysis, and organization of subject matter; measuring and testing results; assisting teachers in professional growth.

Educ. 261. *FUNDAMENTALS OF EDUCATIONAL ADMINISTRATION*. (G) 2 hours credit. M T W Th F 8. Caldwell 143. Mr. ELLIOTT.

An introduction to the study of administration with special application to the educational program. Both the science and the art of administration are examined.

Educ. 264. *SCHOOL FINANCE*. (G) 2 hours credit. M T W Th F 11. Stone 212. Mr. GRAGG.

Typical problems: how local school funds are levied, collected, and disbursed; budget making; bonding; sources of state funds and their distribution.

Educ. 267. *EDUCATIONAL LAW*. (G) 2 hours credit. M T W Th F 8. Stone 201. Mr. HIXON.

A course for administrators and teachers concerned with a practical knowledge of federal and state constitutional provisions, statutes, and regulations governing education. Typical topics: legal problems involving teachers, school district officers, compulsory education, transportation, liability, mandated instruction, textbook control, cooperative services. Students will be given opportunity to study the educational law of their own states.

THIRD ANNUAL ADMINISTRATORS' CONFERENCE

The School of Education will conduct the third annual work conference for administrators during the fifth week of the Summer Session, August 1-6. This year's conference will focus attention on "Interpreting Education to the Public." Dr. Benjamin Fine, education editor of *The New York Times*, will serve as director. Since preregistration is required, interested persons should write to Lloyd H. Elliott, 356 Day Hall, Cornell University.

ADULT EDUCATION

The School of Education has extended its program to meet the increased demands for qualified leaders in adult education. Three courses in adult education are available to teachers, directors of adult education, and leaders in other agencies concerned with adult education. Graduate students may now choose a major or a minor in this field.

Educ. 293u. *ADMINISTRATION AND SUPERVISION OF ADULT EDUCATION*. (G) (U by permission) 2 hours credit. July 6-July 23. For administrators, supervisors, social workers, teachers, and others interested in adult leadership. M T W Th F 9, and laboratory section to be arranged. Warren 101. Mr. HOSKINS.

The course will be developed to meet the needs of those responsible for the direction of comprehensive programs of adult education in the secondary schools. The selection or training of special teachers for the development of unit courses will be emphasized. The services of several directors of programs will be utilized.

*Educ. 437. *PRINCIPLES AND PHILOSOPHY OF ADULT EDUCATION*. (G) 2 or 3 hours credit. M T W Th F 8. Van Rensselaer 124. Miss PATTERSON.

Designed for directors of adult education, teachers, extension agents, school administrators, and other leaders in adult education. Attention is focused on a philosophy of adult education and the principles as they relate to the place of adult education in the total program; adult needs; program planning; adult learning; and the growth and development of adult education. A wide variety of adult education activities in the Ithaca area provides opportunities for students to study the application of principles to local programs. Fee, \$2.

Educ. 636. *METHODS AND MATERIALS IN ADULT EDUCATION*. (See *Industrial Education*, page 31.)

AGRICULTURAL EDUCATION

To provide teachers of vocational agriculture with an opportunity to obtain graduate work without taking extended leaves of absence from their positions, three-week unit courses are being made available in technical, general education, and special methods areas. Two three-week sessions will run concurrently with the regular six-week Summer Session.

Residence credit earned in three-week unit courses may be applied toward the requirement for the Master of Education degree only. Registration for three credit hours is considered a normal load. Permission to earn more than three credit hours may be obtained by special petition to the Director of the School of Education. Registration for the first three-week session will be July 6, and for the second three-week session, July 26.

The following courses, in addition to those in Agricultural Education, are being made available on a three-week unit basis: Educ. 205u, 207u, 293u, and 299u. For unit courses in technical education, see Agricultural Economics, Agricultural Engineering, Animal Husbandry, and Agronomy.

Educ. 136u. *ORGANIZATION AND USE OF ADVISORY COUNCILS IN VOCATIONAL AGRICULTURE*. (U, G) 1 hour credit. July 6-July 23; July 26-August 14. M T W Th F 8. Field work to be arranged. Warren 101. Mr. SMITH.

Selection, organization, functions, and use of advisory committees for departments of vocational agriculture.

Educ. 137u. *SELECTING UNITS OF INSTRUCTION*. (U,G) 1 hour credit. July 6-July 23; July 26-August 14. M T W Th F 10. Field work to be arranged. Warren 101. Mr. SMITH.

Principles involved and procedures used in selecting units of instruction with classes in vocational agriculture for short-term periods in the course of study.

Educ. 232u. *PLANNING UNITS OF INSTRUCTION IN VOCATIONAL AGRICULTURE*. (G) 2 hours credit. July 6-July 23; July 26-August 14. M T W Th F 8-10. Laboratory to be arranged. Stone 212. Mr. KUNSELA.

Consideration will be given to identifying and justifying units, developing teaching objectives, analyzing farm problems, selections of teacher-pupil activities and the evaluation of pupil progress and achievement as applied to individual and group instruction.

Educ. 234u. *EDUCATION FOR LEADERSHIP OF FARM YOUTH AND ADULT GROUPS*. (G) (U by permission) 2 hours credit. July 26-August 14. M T W Th F 9 and laboratory section to be arranged. Warren 101. Mr. HOSKINS.

Designed for leaders in the fields of agricultural education who are responsible for organizing programs. A consideration of the objectives and trends in part-time education and in social-economic problems in rural areas.

Educ. 293u. *ADMINISTRATION AND SUPERVISION OF ADULT EDUCATION*. (See *Adult Education*, page 26.)

EDUCATIONAL PSYCHOLOGY AND MEASUREMENT

Educ. 211. *EDUCATIONAL PSYCHOLOGY*. (U, G) 2 hours credit. M T W Th F 11. Caldwell 143. Mr. HARRIS.

For teachers, supervisors, guidance workers, and administrators. The course is designed to help students with problems in learning.

Educ. 215. *PSYCHOLOGY OF ADOLESCENCE*. (U,G) 2 hours credit. M T W Th F 10. Warren 31. Mr. ANDRUS.

A study of the interrelationships of organic and cultural heritage, physical and social environment in respect to the physical, intellectual, moral, social, and emotional development of the adolescent; the effect of preceding stages of development on maturity.

Educ. 251. *EDUCATIONAL MEASUREMENT*. (G) 2 hours credit. Prerequisite, a course in educational psychology or permission of instructor. M T W Th F 10. Warren 132. Mr. AHMANN.

A study of the construction and administration of achievement tests and the use of aptitude tests, achievement tests, and other measuring instruments in the classification and guidance of pupils and improvement of instruction.

Educ. 253. *INTRODUCTION TO EDUCATIONAL STATISTICS*. (G) 2 hours credit. M T W Th F 8. Warren 132. Mr. AHMANN.

A study of common statistical procedures encountered in educational literature and research. The course includes the computation and interpretation of descriptive measures and tests of significance.

(Educ. 315. *READING IN THE SECONDARY SCHOOL*. Tentatively scheduled for the 1955 Summer Session.)

(Educ. 316. *READING CLINIC*. This course, which will involve the diagnosis and remediation of pupils with reading difficulties, is tentatively scheduled for the 1955 Summer Session. The offering will be of interest to both elementary and secondary school teachers. Prerequisite: either 313 or 315. Attention is called to Educ. 317, which is being offered during the 1954 Summer Session.)

Educ. 317. *EDUCATIONAL DIAGNOSIS AND REMEDIATION*. (G) 2 hours credit. M T W Th F 9. Warren 232. Mr. HARRIS.

A course designed to explore fully the general techniques of diagnostic and remedial procedures and to develop their implications for the basic skills. This course will be particularly valuable for those who wish to enroll in the Reading Clinic tentatively scheduled for the 1955 Summer Session.

ELEMENTARY EDUCATION

Educ. 24. *SOCIAL STUDIES IN THE ELEMENTARY SCHOOL*. (G) 2 hours credit. M T W Th F 8. Goldwin Smith 236. Miss KLEE.

This course will be conducted as a workshop in which group discussion is combined with curriculum planning. Attention will be given to the contributions which the social studies can make to general elementary education. Each member of the class will have the opportunity to organize learning experiences for the grade level in which he is most interested.

Educ. 225. *DEMONSTRATION SCHOOL*. 1 hour credit. M T W Th F 9-11:30. Conferences for observers, T Th 2-2:30. Comstock 245. Miss KNAPP and others.

A demonstration school exemplifying modern informal methods in elementary schools will be maintained on the campus for observational purposes. Special opportunities for observation will be scheduled for classes in supervision and methods.

Educ. 247. *SEMINAR IN ELEMENTARY EDUCATION*. (G) 2 hours credit. M W F 1:30-3:00. Warren 101. Mrs. SMITH.

Designed for inexperienced teachers in the elementary school. A consideration of the use of libraries, audio-visual aids, and other teaching materials; the keeping of records and preparing of reports; relationships with principals and supervisors; and pupil personnel problems of the elementary school.

Educ. 313. *METHODS OF TEACHING READING*. (G) 2 hours credit. M T W Th F 12. Comstock 145. Miss COOKE.

Designed for teachers, supervisors, and administrators in the elementary school. The basis for the improvement of reading instruction. Appraisal of teaching practices and instructional materials; group testing programs and individual diagnostic procedures; remedial and corrective reading techniques.

Educ. 314. *ARITHMETIC IN THE ELEMENTARY SCHOOL*. (G) 2 hours credit. M T W Th F 10. Caldwell 143. Mrs. GELDER.

A course concerned with recent developments in the field of arithmetic, beginning with a survey of the history of numbers and proceeding to an evaluation of newer trends in the methods now being used. Each student may concentrate on the problems in the area in which he is most interested.

Educ. 107. *THE TEACHING OF NATURE STUDY AND ELEMENTARY SCHOOL SCIENCE*. (See *Nature Study and Science Education*, page 31.)

Ag.En. 170. *HANDICRAFT FOR TEACHERS*. (See *Agricultural Engineering*, page 22.)

Sp.&Dr. 231. *SPEECH FOR THE CLASSROOM TEACHER*. (See *Speech and Drama*, page 37.)

Music 109. *MUSIC IN THE ELEMENTARY SCHOOL*. (See *Music*, page 39.)

Child Development and Family Relationships, see page 39.

GUIDANCE AND PERSONNEL ADMINISTRATION

Educ. 282. *EDUCATIONAL AND VOCATIONAL GUIDANCE*. (G) 2 hours credit. M T W Th F 9. East Roberts 222. Mr. NELSON.

Guidance principles and practices. Historical and theoretical background of the guidance movement; educational, vocational, and other information needed; the study of the individual; group methods; counseling; placement and follow-up; the organization, administration, and appraisal of guidance programs.

Educ. 283. *COUNSELING*. (G) 2 hours credit. M T W Th F 11. Prerequisites, an introductory course in guidance and a course in testing. East Roberts 223. Mr. NELSON.

Primarily for graduate students who wish to become certified as counselors. Principles and techniques of counseling with individuals concerning various kinds of educational, vocational, and social adjustment problems.

Educ. 285. *OCCUPATIONAL AND EDUCATIONAL INFORMATION*. (G) 4 hours credit. M T W Th F 10; field trips and laboratory periods as arranged. East Roberts 223. Instructor to be announced.

Survey and appraisal of occupations and educational opportunities; study of sources of information used in counseling; job analysis; vocational trends. Field trips to places of employment.

Educ. 287. *PRACTICUM IN MEASUREMENT AND APPRAISAL FOR COUNSELORS*. (G) 2 hours credit. Prerequisites, 282 and 283, or their equivalents, and a course in testing. M T W Th F 9. Stone 212. Mr. ANDRUS.

This course provides experience in the use of tests and other instruments for the psychological appraisal of individuals. It is one of the courses required for permanent certification in guidance in New York State.

Courses tentatively scheduled for the Summer Session of 1955: Educ. 284. *Group Techniques in Guidance*; Educ. 286. *Organization and Administration of Guidance Programs*; Educ. 288. *Case Studies in Counseling*.

HOME ECONOMICS EDUCATION

Educ. 403. *SPECIAL PROBLEMS FOR GRADUATE STUDENTS*. (G) Credit and hours to be arranged. Department staff.

For graduate students recommended by their chairmen and approved by the instructor in charge for independent, advanced work.

Educ. 407. *THESIS AND RESEARCH*. (G) Credit and hours to be arranged. Registration with permission of the instructor. Department staff.

*Educ. 433. *TEACHING HOMEMAKING AT THE SECONDARY SCHOOL LEVEL*. (G) 2 hours credit. M T W Th F 10. Van Rensselaer 124. Miss MOSER.

Designed for students who have had experience in teaching homemaking in secondary schools. Consideration will be given to program planning, teaching procedures, materials, and other pertinent problems related to the teaching of homemaking at the secondary school level. Opportunity will be provided for work on individual problems. Fee, \$2.

Educ. 437. *PRINCIPLES AND PHILOSOPHY OF ADULT EDUCATION*. (See *Adult Education*, page 26.)

*Educ. 456. *CURRENT DEVELOPMENTS AND HOME ECONOMICS EDUCATION*. (G) 2 hours credit. M T W Th F 11. Van Rensselaer 124. Miss PATTERSON.

Students in this course will consider (a) some of the social, economic, and technological developments that affect families today, and (b) the implications of these developments for teaching home economics. Attention will be focused on current developments as they apply to teaching family relations, managing the home, rearing children, housing, feeding, and clothing the family. Consultants will meet with the students at appropriate periods to help clarify developments being considered. Fee, \$2.

*Educ. 459. *EVALUATION*. (G) 2 or 3 hours credit. M T W Th F 9, with additional time arranged for students registered for 3 hours. Van Rensselaer 3M11. Miss BLACKWELL.

Basic principles of evaluation will be studied in relation to specific methods of appraising educational programs or pupil achievement. Students may construct and use at least one evaluation instrument. Those who register for three credits will have opportunity to gain additional experience in developing or evaluating several methods of educational appraisal. Fee, \$2.

INDUSTRIAL EDUCATION

Educ. 332. *DEVELOPMENT OF COURSES OF STUDY IN INDUSTRIAL EDUCATION*. (U,G) 2 hours credit. M T W Th F 10. I.&L.R. Bldg. 14. Mr. BROPHY.

Study of the principles and procedures of course-of-study development. Content will include objectives of general and vocational education and their bearing on courses of study; controls which influence courses; interrelationships of courses within the curriculum; evaluation of courses of study. Emphasis will be placed upon the development of specific courses based upon occupational and other analyses.

Educ. 631. *SEMINAR IN INDUSTRIAL EDUCATION*. (U,G) 2 hours credit. M T W Th F 9. I.&L.R. Bldg. 14. Mr. EMERSON.

A graduate seminar dealing with problems of special importance in the field of industrial education within industry and in public industrial and technical institutions at the present time.

Educ. 634. *INDUSTRIAL EDUCATION IN SMALLER COMMUNITIES*. (U,G) 2 hours credit. M T W Th F 12. I.&L.R. Bldg. 14. Mr. BROPHY.

The organization and conduct of industrial education programs serving smaller

high schools or consolidated school districts. Emphasis will be placed upon diversified part-time cooperative programs, apprentice training classes and vocational schools, county unit programs, and intermediate school districts.

Educ. 636. *METHODS AND MATERIALS IN ADULT EDUCATION*. (U,G) 2 hours credit. M T W Th F 11. I&L.R. Bldg. 14. Mr. EMERSON.

Deals with adult education, from the standpoint of the teacher or group leader, in adult evening classes, extension programs, educational programs in industrial plants, and workers' education. Types of adult education service; course and program development; methods of instruction, including conference leadership and role playing; audio-visual and other instructional aids and their uses with adult groups; techniques in dealing with large groups.

Educ. 699. *SPECIAL STUDIES*. (G) Directed research in special problems. Credit and hours to be arranged.

NATURE STUDY AND SCIENCE EDUCATION

Educ. 107. *THE TEACHING OF NATURE STUDY AND ELEMENTARY SCHOOL SCIENCE*. (U,G) 2 hours credit. Lectures, M W F 10; laboratory or field work, T Th 2-4:30. Stone 7. Miss GORDON.

The content and method of nature study and elementary school science with emphasis on the earth science aspects. (Given in a three-year cycle, emphasizing the biological, the physical, and the earth science aspects of the subject.)

Educ. 108. *FIELD NATURAL HISTORY*. (U,G) 2 hours credit. Lectures, M W 2-2:50; field trips, M W 2:50-5:20, F 2-4:30. Stone 7. Mr. FISCHER.

Field trips and lectures devoted to a study of the natural history of various ecological units, with special emphasis on their contribution to the teaching of science at elementary and secondary levels.

Educ. 204. *AUDIO-VISUAL METHODS IN TEACHING*. (U,G) 2 hours credit. M T W Th F 8. Stone 7. Mr. JOHNSON.

A study of pictures, posters, graphs, models, slides, films, and other audio-visual devices in their relation to instruction. While emphasis will be on effective methods and techniques concerned with the use of audio-visual materials and devices, there will also be opportunities to prepare materials for classroom use and for mass communication.

Educ. 205u. *THE TEACHING OF CONSERVATION*. (U,G) 3 hours credit. July 26-August 13. M T W Th F 9-12. Stone 7. Mr. JOHNSON and Mr. FISCHER.

A workshop type of offering for teachers and others concerned with instruction that stresses the wise use of natural resources. The informal lectures, demonstrations, field trips, work sessions, and group discussions will provide familiarity with principles, materials, and methods of conservation education. Individual needs and interests will help to determine these activities. Professional workers in the various fields of conservation will assist in the workshop.

Educ. 207u. *THE TEACHING OF SCIENCE IN SECONDARY SCHOOLS*. (U,G) 3 hours credit. July 6-July 23. M T W Th F 9-12. Stone 7. Mr. JOHNSON, Mr. FISCHER, and other staff members.

A workshop type of offering which will involve (a) informal discussions and demonstrations to acquaint science teachers with basic information and recent developments in science, (b) analysis and discussion of teaching problems, (c) visits to selected industries and laboratories where science is applied, and (d) opportunities to work under the guidance of scientists and educators on curricular and other projects of special significance to the teacher.

Educ. 209. *THE DEVELOPMENT OF NATURE AND SCIENCE EDUCATION IN THE UNITED STATES*. (U,G) 2 hours credit. M T W Th F 12. Stone 7. Miss GORDON.

A survey of origins and developments in nature and science education, both in and out of schools, with emphasis on leaders and their philosophies.

SECONDARY EDUCATION

Educ. 130. *SOCIAL STUDIES IN THE SECONDARY SCHOOL*. (U,G) 2 hours credit. M T W Th F 10. Goldwin Smith 236. Miss KLEE.

The course is offered to meet the needs of two groups, those who wish to satisfy teacher certification requirements, and teachers of experience who wish the opportunity to carry on projects of individual interest in the fields of instruction, curriculum, or evaluation. Prospective members of the class are invited to correspond with the instructor concerning details of the course and suggestions for individual study projects.

Educ. 391. *THE JUNIOR HIGH SCHOOL*. (G) 2 hours credit. M T W Th F 8. Warren 232. Miss BARTHOLOMEW.

This course will consider the historical development and present status of the junior high school; the program of studies, the curriculum, organization, administration, and supervision. The work of the junior high school teacher will be discussed with reference to special problems of instruction and his contribution to the total school program.

SPECIAL STUDIES, RESEARCH, AND PHILOSOPHY

Educ. 199. *INFORMAL STUDY IN EDUCATION*. (U) Credit as arranged. Members of the staff of the School of Education.

Educ. 244. *PHILOSOPHY OF EDUCATION*. (G) (U by permission) 2 hours credit. M T W Th F. 10. Comstock 145. Mr. HIXON.

A critical consideration of educational philosophies which are generally recognized as significant influences upon education in the United States.

Educ. 299u. *EDUCATIONAL RESEARCH METHODS*. (G) 2 hours credit. July 26-August 14. Lecture, M T W Th F 11-12:30. One three-hour laboratory per week to be arranged. For graduate students engaged in the process of preparing a thesis. Warren 132. Mr. LEAGANS.

Consideration is given to the nature of scientific method, to the major methods of research in education, to the analysis of research problems, to the major criteria of research, to the analysis of data, and to the fundamentals of thesis writing.

Educ. 300. *SPECIAL STUDIES IN EDUCATION*. (G) Credit as arranged. Members of the staff of the School of Education.

Students working on theses or other research projects may register for this course. The staff members concerned must be consulted before registration.

READING IMPROVEMENT PROGRAM. . . . As a service to all who are attending the Summer Session, the Cornell Reading Improvement Program will offer a four-week course of instruction designed to increase efficiency in reading rate and comprehension. In the past, teachers and others have enrolled in the program for the express purpose of improving their own reading abilities. The course will consist of three class sessions and two half-hour laboratory sessions per week. Individual conferences may be arranged by appointment. Registration for this course will be held in Stone 105, July 7, at 1 p.m. A registration fee of \$10 will be payable at this time.

EXTENSION EDUCATION

JULY 12-JULY 30

Cornell University conducts one of four regional summer schools for the professional improvement of extension workers. Twenty-eight states were represented in the enrollment last year. Six courses are offered in the morning, and afternoons are devoted to optional activities such as field trips, recreation, or special seminars. Students may choose two courses for three hours credit at the graduate level. Tuition is \$40. Write for printed announcement of complete details to Professor L. D. Kelsey, Roberts Hall, Ithaca, New York. The list of courses follows:

8 A.M.

Extch. 7u. *EXTENSION INFORMATION AND COMMUNICATIONS*. (G) 1½ hours credit. Daily. Warren 160. Mr. WARD.

This course covers the latest time-saving techniques extension workers can use effectively to present farm, home, or 4-H Club information through newspapers, magazines, radio, television, photography, exhibits, circular letters, and leaflets. Students may prepare materials in their own line of interest. Problems they encounter in extension work will be analyzed. Each student is asked to bring any material that might be helpful in the preparation of a coordinated information program for a new project in his local area. The preparation of such a program takes the place of a final examination. Students also are urged to bring samples of their published materials, circular letters, and visual aids for class discussion.

Extch. 2u. *LEADERSHIP AND GROUP WORK*. (G) 1½ hours credit. Daily. Warren 260. Mr. REEDER.

Designed for extension workers who are concerned with developing and training leaders and who would like some guides and tools for increasing the effectiveness of the groups with which they are working. Many of the basic principles and methods will be utilized in teaching the course, thus providing an opportunity to learn skills and to test some of the principles.

9:30 A.M.

Extch. 3u. *TEACHING IN EXTENSION EDUCATION*. (G) 1½ hours credit. Daily. Warren 160. Mr. LEAGANS.

The course will deal with an analysis of basic principles in the teaching and learning process and procedures for applying them in extension work. A review of the nature of the teaching and learning process will first be made as a foundation for considering the following major problems of the extension teacher: (1) selecting, analyzing, and stating teaching objectives useful in guiding the teaching effort; (2) providing learning experiences that are likely to contribute effectively to the attainment of objectives; (3) attaining effectiveness in the use of teaching methods and techniques; (4) organizing teaching effort so as to attain maximum learning; and (5) evaluating teaching activity and its outcomes. The course approach will assume that the function of extension teaching is to attain specified objectives previously arrived at through the process of program building. Students may find it useful, therefore, to bring with them statements of objectives of one or two current activities in their special field as a basis for applying the course materials to current problems.

Extch. 1u. *EXTENSION EVALUATION*. (G) 1½ hours credit. Daily. Warren 260. Mr. MOE.

A course designed to help extension workers systematically measure and evaluate

the things they do and the results they achieve in relation to extension objectives. Evaluation will be interpreted as an integral part of the total educational process. The course will stress systematic analysis of a worker's day-to-day observations and will also discuss questionnaire construction, sampling, interviewing, and analysis and interpretation of data. The principles of evaluation will be developed in relation to specific problems of class members.

11 A.M.

Extch. 5u. *EXTENSION WORK WITH 4-H CLUBS AND YOUNG MEN AND WOMEN.* (G) 1½ hours credit. Daily. Warren 260. Mr. CLARK.

This course is designed for those who are associated with 4-H Clubs and who do extension work with young men and women. Developmental needs of youth, program objectives, incentives, planning procedures, leader selection and training will be covered. Cooperation with other agencies will be analyzed. The 4-H Club program will be treated separately from work with young men and women. Lectures and discussions will be informal. Committee assignments and reports will be employed in developing the course. Each person is asked to bring samples of outstanding literature and other material for display and study purposes.

Extch. 8u. *MARKETING AND CONSUMER EDUCATION.* (G) 1½ hours credit. Daily. Warren 160. Mr. BEVAN.

This course is designed especially for county agricultural agents and home demonstration agents interested in helping producers with their marketing problems and in an extension program of consumer education. Experience in the Boston and New York areas will be discussed. Practical illustrations of successful methods will be reviewed. A wide variety of products and problems will be included.

ENGINEERING

CIVIL ENGINEERING

Engr. 2715. *REINFORCED CONCRETE DESIGN.* (U) 3 hours credit. Prerequisite, 2704. M T W Th F S 10-12. Lincoln 216. Mr. ZUK.

A first course in reinforced concrete. Elementary theory of reinforced concrete is applied to rectangular slabs, T-beams, beams reinforced for compression, columns, and footings. Shear, diagonal tension, and direct stress combined with flexure are treated. Several design reports are required which include reinforcement drawings, schedules, and formwork.

Engr. 2902. *ENGINEERING LAW.* (U) 3 hours credit. M T W Th F S 8. Lincoln 321. Mr. THATCHER.

An introductory course in the laws of contract, tort, agency, real property, water rights, forms of business organization, sales, and negotiable instruments; special emphasis on contract documents required on construction work; collateral topics such as workmen's compensation, mechanics' liens, arbitration, and patent law are also included.

Engr. 2903. *ECONOMICS OF ENGINEERING.* (U) 3 hours credit. Prerequisites, 2901 and 3231. M T W Th F S 10. Lincoln 321. Mr. THATCHER.

The economic aspects of engineering and the application of principles of management to the work of the engineer; economic selection of materials, equipment, and structures; studies for the replacement of existing units; plant layouts; public works economy, the technique of estimating quantities and costs for various types of engineering projects.

Summer Survey Camp

The School of Civil Engineering conducts a Summer Survey Camp for instruction in surveying for the five-week period between the close of the Summer Session and the beginning of the fall term. The camp is located on Cayuta Lake about 20 miles west of Ithaca. Instruction is primarily for civil engineering students who have completed the basic surveying courses on the campus. Persons desiring additional information should write to Director of Camp Cornell, School of Civil Engineering, Cornell University, Ithaca, N. Y.

ENGINEERING MECHANICS

Engr. 1152. *MECHANICS OF ENGINEERING — DYNAMICS*. (U) 3 hours credit. Prerequisites, 1151 and Mathematics 163. M T W Th F S 10; laboratory, W 1-2:30. Thurston 305. Mr. FARGO.

The principles of dynamics of particles and rigid bodies. Rectilinear, curvilinear, rotational, and general plane motion of rigid bodies. Impulse-momentum, work-energy, virtual work.

Engr. 1153. *STRENGTH OF MATERIALS*. (U) 3 hours credit. Prerequisites, 1151 and parallel registration in 1152. M T W Th F S 12; laboratory, W 2:30-4:00. Thurston 305. Mr. FARGO.

Stress and strain, tension, compression, and shear, riveted and welded joints, elementary beam theory, combined stresses, columns, strain energy beams on several supports.

Engr. 1155. *APPLIED MATHEMATICS*. (U) 3 hours credit. Prerequisites, 1152 and 1153. M T W Th F S 11; laboratory, W 1-2:30. Thurston 304. Mr. GOFF.

The formulation and solution of problems arising in mechanical engineering which involve the use of elementary differential equations and Fourier Series. Emphasis is placed on numerical as well as analytical methods of solution.

ENGINEERING MATERIALS

Engr. 1221. *ENGINEERING MATERIALS*. (U) 3 hours credit. Prerequisites, 1153 and Physical Chemistry 402 or its equivalent. M T W Th F 9; S 8-10. Thurston 203. Mr. GOFF.

A lecture course in engineering materials dealing with the making, shaping, and treating of metals and alloys and the effects produced thereby on the physical and mechanical properties which govern their adaptability for specific service requirements.

ENGLISH, SPEECH AND DRAMA

ENGLISH

Engl. 302. *MODERN DRAMA*. (U,G) 2 hours credit. M T W Th F 8. Goldwin Smith 124. Mr. PARTRIDGE.

The drama since Ibsen; important British and Continental plays; types and forms.

Engl. 305. *THE SHORT STORY*. (U,G) 2 hours credit. M T W Th F 12. Goldwin Smith 124. Mr. LINN.

The short story as a literary form in the twentieth century, studied in the work of Mansfield, Conrad, James, Lawrence, Hemingway, and others.

Engl. 310. *THE METAPHYSICALS AND THE MODERNS*. (U,G) 2 hours credit. M T W Th F 12. Goldwin Smith 236. Mr. ADAMS.

The metaphysical poets from Donne to Marvell, with emphasis on their influence upon twentieth-century poets and critics.

Engl. 314. *THE AGE OF JOHNSON*. (U,G) 2 hours credit. M T W Th F 9. Goldwin Smith 164. Mr. ZALL.

The social and cultural climate of the later eighteenth century as reflected in the writings of Johnson, Boswell, and their contemporaries.

Engl. 319. *THREE ROMANTIC REBELS: BYRON, PUSHKIN, AND HEINE*. (U,G) 2 hours credit. M T W Th F 11. Goldwin Smith 236. Mr. FOGEL.

Pushkin and Heine will be read in translation. Special emphasis will be placed on Byron's *Childe Harold's Pilgrimage* and *Don Juan* and on Pushkin's *Eugene Onegin*. Topics to be considered: the life of feeling; the cult of personality; the outcast as hero; the exile and his homeland; the defense of liberty; the satire of fashionable society.

Engl. 329. *AMERICAN LITERATURE TO 1860*. (U,G) 2 hours credit. M T W Th F 8. Goldwin Smith 156. Mr. BICKNELL.

The writings of Franklin, Poe, Emerson, Thoreau, Hawthorne, Melville, and others, with emphasis on democratic ideals and problems.

Engl. 338. *THE MODERN ENGLISH NOVEL*. (U,G) 2 hours credit. M T W Th F 11. Goldwin Smith 156. Mr. SALE.

A critical study of representative English novelists including Hardy, Conrad, Galsworthy, Lawrence, Forster, and Joyce.

Engl. 349. *RECENT AMERICAN POETRY*. (U,G) 2 hours credit. M T W Th F 10. Goldwin Smith 190. Mr. FRENCH.

American poets of this century, including Robinson, Frost, Sandburg, Eliot, and MacLeish. Textbooks: Louis Untermeyer, *Modern American Poetry* (Mid-Century Edition); G. D. Sanders and J. H. Nelson, *Chief Modern Poets of England and America*.

Engl. 366. *CHAUCEER'S CANTERBURY TALES*. (U,G) 2 hours credit. M T W Th F 12. Goldwin Smith 164. Mr. FRENCH.

A literary study of selected tales. Textbook: F. N. Robinson, *Chaucer's Complete Works*. No previous knowledge of Middle English is required.

Engl. 370. *SHAKESPEARE'S TRAGEDIES*. (U,G) 2 hours credit. M T W Th F 9. Goldwin Smith 124. Mr. SCHOECK.

The art of Shakespeare as illustrated in six tragedies: *Julius Caesar*, *Hamlet*, *Othello*, *King Lear*, *Macbeth*, and *Antony and Cleopatra*.

Engl. 386. *CREATIVE WRITING*. (U,G) 2 hours credit. M T W Th F 9, and conferences to be arranged. Goldwin Smith 236. Mr. HATHAWAY.

Particular emphasis upon writing short stories and poetry, though other kinds of writing may be undertaken. Analysis of students' writing, study of models and trends, personal conferences.

Engl. 398. *IBSEN AND SHAW*. (U,G) 2 hours credit. M T W Th F 10. Goldwin Smith 124. Mr. ADAMS.

The role of a social ethic on the modern stage; a critical study in the dramatic strategies of moral debate.

Engl. 402. *PRINCIPLES OF LITERARY CRITICISM*. (U,G) 2 hours credit. M T W Th F 11. Goldwin Smith 164. Mr. HATHAWAY.

Theories of literary criticism from the Renaissance to the present.

Engl. 908. *SPECIAL TOPICS FOR INVESTIGATION*. (G) 2 hours credit. Conferences to be arranged.

For graduate students writing Masters' essays or engaging in special research. The course is administered by various members of the staff. Students who wish to be put in touch with a suitable director for the work they have in mind may write to or consult Mr. W. H. FRENCH.

SPEECH AND DRAMA

Sp.&Dr. 101. *PUBLIC SPEAKING*. (U) 2 hours credit. M T W Th F 11. Goldwin Smith 26. Mr. WICHELS.

Practice in speechmaking on topics of current interest. Methods of preparation and delivery studied as a guide to practice; class discussions; conferences. Regular students passing the course are admitted to Speech and Drama 202 and 213. Textbook: McBurney and Wrage, *Art of Good Speech*.

Sp.&Dr. 121. *AN INTRODUCTION TO THE THEATRICAL ARTS*. (U,G) 2 hours credit. M T W Th F 11. Morse, Stage Laboratory. Mr. ALBRIGHT.

A survey of the elements of dramatic communication, with the primary objective of understanding, appreciation, and rational enjoyment of the theatre in its various forms. Some attention will be paid to such extensions of theatre as the film and the radio; no experience in dramatic production is required. Lectures, readings, demonstrations, field trips.

Sp.&Dr. 205. *DISCUSSION AND CONFERENCE METHODS*. (U,G) 2 hours credit. M T W Th F 9. Goldwin Smith 26. Mr. ARNOLD.

Introduction to the principles of group thinking with special attention to problem solving and decision making through conference methods. Readings; lectures; practice in informal and committee discussions, in committee hearings, and in conference procedures for disseminating information. Textbook: Wagner and Arnold, *Handbook of Group Discussion*.

Sp.&Dr. 231. *SPEECH FOR THE CLASSROOM TEACHER*. (U,G) 2 hours credit. M T W Th F 12. Goldwin Smith 21. Mr. ARNOLD.

This course is designed to help teachers in elementary and secondary schools improve in the speech skills and forms of communication they constantly use: oral exposition, dialogue and recitation, discussion, reading aloud, public speaking. Study of principles; constant practice; conferences on individual needs. Textbook: Sorrenson, *Speech for the Teacher*.

Sp.&Dr. 290. *THESES AND SPECIAL PROBLEMS IN PUBLIC ADDRESS*. (G) 2 or more hours credit. Mr. ARNOLD.

Required of regularly registered Summer Session graduates working on theses. Open to other graduates prepared for independent study of special topics in rhetoric and public speaking.

Sp.&Dr. 333. *TEACHERS' COURSE IN PHONETICS AND SPEECH TRAINING*. (U,G) 2 hours credit. M T W Th F 9. Goldwin Smith 21. Mr. THOMAS.

A study of English phonetics, pronunciation, and the improvement of speech; primarily for secondary and elementary school teachers. Textbook: Thomas, *Introduction to Phonetics of American English*.

Sp.&Dr. 351. *METHODS OF SPEECH IMPROVEMENT FOR THE CLASSROOM TEACHER*. (U,G) 2 hours credit. M T W Th F 10. Goldwin Smith 21. Mr. THOMAS.

Development of children's speech; difficulties associated with that development. Practical therapy for the classroom teacher. Textbook: Anderson, *Improving the Child's Speech*.

Sp.&Dr. 390. *THESES AND SPECIAL PROBLEMS IN SPEECH TRAINING AND PHONETICS*. (G) 2 or more hours credit. Mr. THOMAS.

Required of regularly registered Summer Session graduates working on theses. Open to other graduates prepared for the independent study of special topics in speech training and phonetics.

Sp.&Dr. 401. *DRAMATIC PRODUCTION: DIRECTION*. (U,G) 2 hours credit. M T W Th F 10. Morse, Stage Laboratory. Mr. ALBRIGHT.

Theory of stage direction; fundamentals of theatrical mounting; survey of practical phases of production. Prerequisite for further work in dramatic production. Textbook: Dolman, *Art of Play Production*.

Sp.&Dr. 421. *DRAMATIC INTERPRETATION AND ACTING*. (U,G) 2 hours credit. M W F 2-4. Goldwin Smith 24. Mr. McCALMON.

A practice course in oral interpretation, pantomime, acting, and group rehearsal. Textbook: Albright, *Working Up a Part*.

Sp.&Dr. 433. *THEATRE PRACTICE*. (U,G) 2 or 4 hours credit. Hours to be arranged. Mr. CREPEAU.

Technical practice coordinated with the regular productions of the Summer Theatre; readings in the techniques involved.

Sp.&Dr. 457. *MODERN AMERICAN DRAMA AND THEATRE*. (U,G) 2 hours credit. M T W Th F 11. Goldwin Smith 124. Mr. McCALMON.

A study of the American theatre and of representative American plays since 1900. Emphasis is on the drama as a reflection of cultural history and, in turn, as a cultural influence. Textbook: Hughes, *A History of the American Theatre: 1700-1950*.

Sp.&Dr. 480. *THE MOTION PICTURE: A SURVEY*. (U,G) 2 hours credit. M T W Th F 12. Morse, Stage Laboratory. Mr. STANTON.

The development of the motion picture as a modern art. Characteristic problems and devices of the art; economic and social aspects; the documentary film; the educational film. Numerous films will be viewed. Students are urged to attend the film programs of the Summer Theatre.

Sp. & Dr. 490. *THESES AND SPECIAL PROBLEMS IN DRAMA AND THE THEATRE*. (G) 2 or more hours credit. MESSRS. STANTON, ALBRIGHT, and McCALMON.

Required of regularly registered Summer Session graduates working on theses. Open to other graduates prepared for the independent study of special topics in drama and the theatre.

SPEECH CLINIC. For students working under the direction of the department. Mr. THOMAS. By appointment. No credit.

Students may elect a major and/or minor with emphasis on (1) Public Address, (2) Phonetics and Speech Training, (3) Drama and the Theatre. For students planning a program of graduate studies in successive summers, advanced courses in each of these three areas are offered in alternating sessions, and special provision is made for directed independent study.

FINE ARTS

ART: HISTORY AND APPRECIATION

Art 102. *INTRODUCTION TO RENAISSANCE AND MODERN ART*. (U,G) 2 hours credit. Lectures, M T W Th F 12. Goldwin Smith Museum. Mr. WAAGE.

The relationship of art to society in Western Europe from 1400 to the present, as exemplified in the works of the major painters and sculptors.

Art 507. *TWENTIETH CENTURY ART*. (U,G) 2 hours credit. Lectures, M T W Th F 10. Goldwin Smith 35. Mr. WAAGE.

The consequences of the divorce of painting and sculpture from social function; painters' painting and expressionism; individualistic and clique vagaries; attempts toward reintegration.

MUSIC

Music 101. *THE ART OF MUSIC*. (U) 2 hours credit. M T W Th F 9. Music Bldg. 6. Mr. HULL.

An approach to the understanding and rational enjoyment of the art of music, offered especially for students who have had no technical training in the subject. Most of the outside work consists of listening to phonograph records.

Music 109. *MUSIC IN THE ELEMENTARY SCHOOL*. (U,G) 2 hours credit. M T W Th F 10. Music Bldg. 2. Mr. CAMPBELL.

Designed for elementary school teachers who are required to teach music with or without the assistance of the music supervisor. Includes survey of literature, rote singing, sight-reading and part-singing, elementary theory and appreciation, and simple piano accompaniment.

PAINTING

Arch. 300. *PAINTING AND COMPOSITION*. (U,G) 2 hours credit. M T W Th F 8-10. Morse 101. Mr. EVETT.

A studio course dealing with the fundamentals of painting. In the study of some of the principal considerations of modern art, the classroom assignments progress from simple to more complex pictorial organizations. Though not an elementary presentation, the course has no prerequisites and is open to both beginners and intermediate students. Media: tempera and casein.

Arch. 309. *PAINTING AND COMPOSITION*. (U,G) 2 to 6 hours credit. Registration by permission of the instructor. May be repeated for credit. M T W Th F 10-12. Morse 120. Mr. EVETT.

A studio course for those who have had considerable experience in drawing and painting.

Arch. 324. *WORKSHOP FOR THE ART TEACHER*. (G) 2 hours credit. M T W Th F 10-12. Room to be assigned. Mr. EVETT.

Combines seminar and studio course. Problems of materials and methods for teaching art in primary and secondary schools; for those who have art teaching experience as well as those who are teaching art in the primary grades for the first time. Individual needs are considered, and opportunity for discussion is provided. Part of the course is given to planning art curricula and to methods of presentation and emphasis.

HOME ECONOMICS

CHILD DEVELOPMENT AND FAMILY RELATIONSHIPS

*C.D.&F.R. 315. *CHILD DEVELOPMENT*. (U,G) 2 hours credit. M T W Th F 9. Van Rensselaer G62. Mr. BALDWIN.

The aim of this course is to give the student an understanding of structure, function, and development of the growing human being as the result of interplay between biological, psychological, and social factors. Course material is drawn from the pertinent behavioral sciences. Fee, \$2.

*C.D.&F.R. 322. *PSYCHOLOGY OF ADOLESCENCE*. (U,G) 2 hours credit. M T W Th F 10. Van Rensselaer 339. Mr. SHIRE.

The purpose of this course is to give the student an understanding of the psychological forces and social processes motivating adolescent behavior and thought. The adolescent's relationships with his family, peers, and teachers are stressed. Fee, \$2.

*C.D.&F.R. 343. *CREATIVE EXPRESSION AND THE GROWTH OF THE CHILD*. (U,G) 2 hours credit. M T W Th F 8. Van Rensselaer 121. Mr. BRITAIN.

This course is designed primarily for those who are teaching or who plan to teach kindergarten and the primary grades. It is aimed at an appreciation, understanding, and evaluation of the creative productions of children in relation to their developmental stages. Lecture, discussion, observation, participation, and work with materials will be included. Fee, \$2.

*C.D.&F.R. 351. *CHILDREN'S LITERATURE*. (U,G) 2 hours credit. M T W Th F 9. Van Rensselaer 121. Miss REEVES.

Literature as a resource in children's living. The relation of children's literature to world literature. Traditional and modern forms. Illustration in children's books. Reading interests of children two to twelve. Fee, \$2.

*C.D.&F.R. 352. *WORKSHOP IN WRITING FOR YOUNG CHILDREN*. (U,G) 2 hours credit. M W 2-4:30. Van Rensselaer 124. Miss REEVES.

The purpose of this course is not to turn out professional writers but to explore the world of the young child through the creative activity of writing for him. Roundtable discussions of form, content, style, and problems of presentation in children's literature; evaluation of selected books and stories; writing; reading and criticism of manuscripts. Fee, \$2.

*C.D.&F.R. 360. *PSYCHODYNAMICS OF HUMAN BEHAVIOR*. (U,G) 2 hours credit. M T W Th F 12. Van Rensselaer G62. Mr. SHIRE.

A study of the motivating forces in human behavior. Both conscious and unconscious processes directing behavior will be considered. Special attention will be given to learning and change in motivation as these relate to the tasks of teacher and parent. Fee, \$2.

*C.D.&F.R. 370. *MARRIAGE*. (U,G) 2 hours credit. Prerequisite, a basic course in psychology or sociology, or permission of the instructor. M T W Th F 11. Van Rensselaer 121. Mr. BURROUGHS.

This course is designed to acquaint the student with the growing body of scientific knowledge concerning marriage, the experiences that precede it, and the adjustments, satisfactions, and problems growing out of it. Such topics as the following will be discussed: emotional and social maturity and readiness for marriage; personality and social factors in marriage adjustment; sex life in marriage; pregnancy and parenthood; the married woman and outside employment; marital failure and divorce; sources of help for troubled marriages. Fee, \$2.

*C.D.&F.R. 381. *THE TEACHER AS COUNSELOR*. (U,G) 2 hours credit. T Th 2-4:30. Van Rensselaer 121. Mr. FELDMAN.

A survey will be made of those theories and methods which are most applicable to the teacher's role as both individual and group counselor. Teaching methods will include lectures, discussions, readings, films, case illustrations, and demonstrations. Fee, \$2.

*C.D.&F.R. 382. *TEACHING OF CHILD DEVELOPMENT*. (U,G) 2 hours credit. T Th 2-4:30. Van Rensselaer 124. Mr. FELDMAN.

The purpose and function of a child development program will be discussed.

Students will explore the applicability to learning of various media such as lecture, group discussion, role taking, panel, case illustrations, and films. The class will be conducted in a workshop fashion. Although the focus of the course will be on teaching in secondary schools, there will be some relevance to other levels. Fee, \$2.

*C.D.&F.R. 407. *INDIVIDUAL RESEARCH IN CHILD DEVELOPMENT AND FAMILY RELATIONSHIPS*. (G) 1 to 6 hours credit. Registration by permission of the instructor; hours by arrangement. Department staff.

This is planned for students who are ready to undertake their own research and theses. Fee dependent on the nature of the problem.

*C.D.&F.R. 421. *SEMINAR IN RESEARCH IN PERSONALITY DEVELOPMENT*. (G) 2 hours credit. T Th 2-4:30. Van Rensselaer G60. Mr. BALDWIN.

Analysis and critical evaluation of experimental and observational data underlying various empirical and theoretical generalizations concerning the development of personality in childhood. Fee, \$2.

ECONOMICS OF THE HOUSEHOLD AND HOUSEHOLD MANAGEMENT

*Ec.Hs. 310. *MANAGEMENT IN FAMILY LIVING*. (U,G) 2 hours credit. Discussion, group projects, and field trips, M W F 8-10. Van Rensselaer G-19. Mrs. BRATTON.

A study of the ways in which different families manage with their available resources to attain their purposes. An opportunity to work with family members in their homes on a solution of some of their management problems. Simplification of work as one means of managing. Demonstrations, motion pictures, slides, photographs, and work centers set up in the laboratory. Opportunity for preparing illustrative material. One all-day tour, time to be arranged. Fee, \$6.

*Ec.Hs. 320. *MANAGEMENT IN RELATION TO HOUSEHOLD EQUIPMENT*. (U,G) 2 hours credit. M 2, W F 2-4, and two hours for laboratory practice to be arranged at the student's convenience. Van Rensselaer G-19. Mrs. CONRAD.

Selection, use, care, and repair of household equipment in relation to individual situations. Relative advantages of various types of equipment in performing certain tasks. Trips to homes and retail stores. Selection and use of home appliances in school situations. Fee, \$3.

*Ec.Hs. 330. *MANAGEMENT IN RELATION TO PERSONAL FINANCES*. (U,G) 2 hours credit. M T W Th F 10. Van Rensselaer 121. Miss WARREN.

The management procedure applied to individual and family problems involving finances. The influence of economic conditions, as well as personal circumstances, on one's financial situation. The effect of standards of living on the amount spent. Problems connected with estimating future expenditures. Considerations in developing a savings program and in purchasing insurance. The nature of investments in real estate and government and corporate securities. Advantages and disadvantages in the use of credit; variations among credit agencies. Problems in arranging for transfer of property to heirs. Various types of records helpful in managing. Fee, \$2.

*Ec.Hs. 403. *SPECIAL PROBLEMS IN ECONOMICS OF THE HOUSEHOLD AND HOUSEHOLD MANAGEMENT*. (G) Credit and hours to be arranged. Registration by permission. Staff of the department.

For graduate students recommended by their chairmen and approved by the head of the department and the instructor in charge for independent, advanced work. Fee will be dependent on the nature of the problem.

*Ec.Hs. 407. *THESIS AND RESEARCH IN ECONOMICS OF THE HOUSEHOLD AND HOUSEHOLD MANAGEMENT*. (G) Credit and hours to be arranged. Registration with permission of the instructor. Staff of the department.

Fee will be dependent on the nature of the problem.

*Ec.Hs. 430. *ECONOMIC CONDITIONS IN RELATION TO THE WELFARE OF FAMILIES*. (G) 2 hours credit. M T W Th F 12. Van Rensselaer 121. Miss WARREN.

The relationship between the economic welfare of families and the total amount of goods and services produced, the distribution of income, and the general level of prices. Influence of such institutions as specialization, industrialization, money, marketing, and taxation. The interrelationship between outside economic conditions and economic activities in the home. Fee, \$1.

FOOD AND NUTRITION

*F.&Ntr. 306. *MEAL PLANNING AND PREPARATION*. (U,G) 2 hours credit. Prerequisite, a college course in food preparation and nutrition. M T W Th F 11-1:30. Van Rensselaer 361. Miss WILLIAMS.

Consideration is given to problems involved in the selection of food and the planning, preparation, and serving of family meals, as well as the organization and management of time and energy. Problems related to current food prices and the world food supply are emphasized. Fee, \$14.

*F.&Ntr. 326. *MODERN THEORY AND PRACTICE IN FOOD PREPARATION*. (U,G) 2 hours credit. Prerequisite, college course in food preparation. Planned primarily for teachers, extension workers, and dietitians who wish to increase their understanding of the up-to-date principles of food preparation. M T W Th F 9. Van Rensselaer 352. Miss BRIANT.

A lecture-demonstration course designed to help the student understand the modern concepts of food preparation. Demonstrations will illustrate selected effects of different procedures of food preparation. As part of the preparation for class discussion, students taking this course will be expected to spend, during the six-week period, 12 hours outside of class time in laboratory preparation, the hours to be arranged at the convenience of the student. Fee, \$4.

*F.&Ntr. 329. *RECENT FINDINGS IN NUTRITION*. (U,G) 2 hours credit. Prerequisite, a college course in nutrition. Except by special permission, the course is not open to students who have had advanced courses in nutrition within the past two years. Lectures and discussions M T W Th F 8. Van Rensselaer 339. Miss HAUCK.

Planned for teachers, extension workers, and dietitians who wish to bring their information about nutrition up-to-date. The topics discussed will be those which are related to practical problems in nutrition. Fee, \$1.

HOUSING AND DESIGN

*H.&Des. 310. *STUDY OF ROOMS, SELECTION AND ARRANGEMENT OF FURNISHINGS*. (U,G) 2 hours credit. No prerequisite but previous study of color and design desirable. M T W Th F 8-10. Van Rensselaer 408. Mr. ARNOLD.

A study of functional arrangement and design in furnishings. The selection and arrangement of furnishings in relation to family needs; the relation of furnishings to the architectural features of rooms. Fee, \$10.

*H.&Des. 319. *CONTEMPORARY DESIGNERS*. (U,G) 2 hours credit. M T W Th F 11. Van Rensselaer 317. Miss TRUE.

A lecture-discussion course dealing with current developments in the field of design; trends in design as represented by the work of a selected group of designers in various areas; activities of art organizations such as museums, galleries, and associations. Fee, \$10.

*H.&Des. 340. *HOUSE PLANNING*. (U,G) 2 hours credit. M T W Th F 2-4. Van Rensselaer 327. Mr. ARNOLD.

An introductory course in space arrangement, incorporating house, site orientation, and neighborhood; drafting room work (consisting of plan and model studies of house and setting), lectures and discussions, local field trips, required reading. Fee, \$10.

*H.&Des. 347. *CHOOSING THE HOUSE AND THE NEIGHBORHOOD*. (U,G) 2 hours credit. M T W Th F 10. Van Rensselaer 3M11. Mr. MONTGOMERY.

Examination of the major issues involved in acquiring a house: (1) guides to securing shelter — whether to own or rent, and how to choose a house and a neighborhood; (2) the roles and practices of those concerned with providing houses — the architect, banker, labor, materials supplier, contractor, merchant builder, prefabricator, real estate agent, and government. Fee, \$5.

*H.&Des. 403. *SPECIAL PROBLEMS FOR GRADUATE STUDENTS*. (G) Credit and hours to be arranged. Department staff.

For graduate students recommended by their chairmen and approved by the head of the department and the instructor in charge for independent, advanced work. Fee will be dependent on the nature of the problem.

INSTITUTION MANAGEMENT

*I.Mgt. 220. *FOOD SELECTION AND PURCHASE*. (U,G) 2 hours credit. Prerequisite, college courses in nutrition and food preparation. Lecture, M W F 10; laboratory, T Th 10-12. Van Rensselaer G62. Miss MOORE.

Planned for dietitians, homemaking teachers, and others who have responsibility for purchasing food. Topics include sources, basis of selection, purchasing practices, specific market information, and care of various classes of food. One out-of-town field trip will be scheduled. Estimated cost of trip, \$4. Fee, \$2.

*I.Mgt. 230. *QUANTITY COOKERY*. (U,G) 2 or 3 hours credit. Prerequisite, college courses in food preparation and nutrition. Lecture, T Th 2; laboratory, M W F 2-5:30. Students taking the course for 3 hours credit will spend approximately 5 additional hours per week in quantity food production or in other appropriate experiences. Van Rensselaer G62 and Cafeteria kitchen. Miss MOORE.

Lectures and discussions include underlying principles and basic procedures in quantity food preparation in relation to quality, quantity, and cost control. The findings and applications of research in these areas will be reviewed. Laboratories give practice in food production, the use of institution equipment, and recipe costing in each department of the Home Economics Cafeteria kitchen where food is prepared for approximately 1,800 persons daily. Fee, \$12.

I.Mgt. 403. *SPECIAL PROBLEMS FOR GRADUATE STUDENTS*. (G) Credit and hours to be arranged. Registration with permission of the instructor. Miss HARRIS and department staff.

For graduate students recommended by their chairmen and approved by the head of the department and the instructor in charge for independent, advanced work.

I.Mgt. 407. *THESIS AND RESEARCH*. (G) Credit and hours to be arranged. Registration with permission of the instructor. Miss HARRIS.

*I.Mgt. 410. *SEMINAR IN INSTITUTION MANAGEMENT*. (G) 1 hour credit. Prerequisite, college courses and experience in food service administration. M W 2-3:30. Van Rensselaer 301. Miss HARRIS.

This seminar will review new developments, including the contributions of research, relevant to various aspects of food service administration or managerial dietetics. Fee, \$2.

TEXTILES AND CLOTHING

*T.&Clo. 210. *DESIGN AND COLOR IN APPAREL*. (U,G) 2 hours credit. Pre-registration desirable. M T W Th F 11-1. Van Rensselaer 216. Mrs. McMURRY.

Opportunity is offered for creative experiences in dress selection to help develop (1) appreciation of dress design, and (2) skill in achieving beauty of costume in relation to the wearer. The course, planned primarily for teachers who anticipate helping individuals to solve their design problems which arise in the selection of wearing apparel, is conducted through lectures, reference reading, discussion, and laboratory practice. Laboratory problems include experimentation with fabric combinations, color analysis, experience in using various kinds of source material as inspiration for original designs, and other problems suited to the needs and interests of the students. Materials provided by the student. Estimated cost of materials, \$5. Fee, \$5.

*T.&Clo. 215. *FITTING AND PATTERN MAKING*. (U,G) 2 hours credit. Pre-registration desirable. Prerequisite, professional experience or course work in the area of clothing design and construction acceptable to the instructor. M T W Th F 11-1. Van Rensselaer 215. Miss SPRATT.

A course planned primarily for teachers to give a background of pattern making as it relates to design, pattern alteration, and fitting. Laboratory problems include fitting a basic pattern, practice in pattern making, the making of two garments, one of which may not be carried through to completion. Materials to be provided by the students at an estimated cost of \$15-\$35. Fee, \$5. Textbook: Harriet Pepin, *Modern Pattern Design*.

*T.&Clo. 345. *TAILORING*. (U,G) 2 hours credit. Preregistration desirable. Registration limited to 16 students. Prerequisite, accredited college courses in elementary and advanced dressmaking acceptable to the instructor. M T W Th F 8-10. Van Rensselaer 234. Miss SPRATT.

An advanced course planned for the teacher or the student with broad clothing experience and skill in all types of garment construction. Laboratory problems will include the making of a coat or suit with emphasis on the techniques of tailoring as they apply to construction problems in dressmaking. Materials to be provided by students at an estimated cost of \$25-\$50. Fee, \$5.

*T.&Clo. 370. *HOUSEHOLD TEXTILES*. (U,G) 2 hours credit. Preregistration desirable. M T W Th F 8-10. Van Rensselaer 278. Miss SROUT.

Selection, use, and care of household fabrics from the consumer's point of view. Sheets, blankets, mattresses, rugs, towels, curtains, and drapery and upholstery fabrics are examples of the field to be covered. New fibers and fabrics will be included. Specifications established by various groups, and laws concerning household textiles will be considered. Laboratory and technical study will extend and supplement discussion periods. Fee, \$5.

*T.&Clo. 373. *NEW DEVELOPMENTS AND TRENDS IN TEXTILES*. (G) (U with permission of instructor.) 2 hours credit. Preregistration desirable. M T W Th F 2-4. Van Rensselaer 278. Miss SROUT.

For students who have some knowledge of textiles and who wish information on

new developments, particularly those of importance to consumers. Emphasis will be on new fibers, fabrics, and finishes. Practical problems in recognition, use, and care will be studied in the laboratory. Fee, \$5.

HOTEL ADMINISTRATION

In 1922 Cornell University established, with the cooperation and financial assistance of the American Hotel Association, a four-year course in hotel administration for high school graduates desiring to enter the administrative departments of the hotel business. Many hotel proprietors and managers who have been unable to take a four-year university course have asked for shorter courses with less formal entrance requirements.

To meet this demand, the Summer Session work in hotel administration is given in unit courses, one to three weeks in length. A circular giving full details of these courses has been issued and will be sent upon request. For this circular, for other information about the work in this department, and for admission to these courses, address Professor H. B. Meek, Statler Hall, Cornell University.

INDUSTRIAL AND LABOR RELATIONS

I.&L.R. 260. *PERSONNEL ADMINISTRATION*. (U,G) 2 hours credit. M T W Th F 9. I.&L.R. Bldg. 10A. Mr. JENSEN.

A study of the ways of working with employees, as individuals and in groups, to ensure the best use of individual capacities, the greatest amount of personal and group satisfaction, and maximum service to the employing organization. Consideration is given to the development and organization of personnel administration, factors influencing the administration and appraisal of personnel functions, including recruitment, selection, placement, training and communications, job evaluation, compensation, performance rating, transfer, promotion, separation, employee services, health and safety, records and reports, and research.

I.&L.R. 293. *SURVEY OF INDUSTRIAL AND LABOR RELATIONS*. (U,G) 2 hours credit. M T W Th F 9. I.&L.R. Bldg. 22. Mr. PERLMAN.

The course will include an analysis of the major problems in industrial and labor relations: labor union history, organization, and operation; labor market analysis and employment practices; industrial and labor legislation and social security; personnel management and human relations in industry; collective bargaining; mediation and arbitration; the rights and responsibilities of employers and employees; the major governmental agencies concerned with industrial and labor relations.

I.&L.R. 400. *LABOR RELATIONS CONTRACT MAKING AND ADMINISTRATION*. (U,G) 2 hours credit. M T W Th F 11. I.&L.R. Bldg. 10A. Mr. JENSEN.

Analysis of substantive issues in labor relations, including a survey of the techniques and scope of contract making, with consideration of the problems growing out of administration, application, and interpretation of the collective agreement.

I.&L.R. 442. *ECONOMICS OF THE LABOR MARKET*. (U,G) 2 hours credit. M T W Th F 12. I.&L.R. Bldg. 22. Mr. PERLMAN.

Examination of wage and employment problems in the individual firm, the industry, and the economy. Topics will include measurement of wages, income, and labor cost; characteristics of labor markets; occupational wage rates; wage determination by employers and under collective bargaining; effects of wage changes on profits and employment; governmental regulation of wages; trends in productivity and national income; labor force and employment problems.

I.&L.R. 451. *THE AMERICAN LABOR UNION*. (U,G) 2 hours credit. M T W Th F 10. I.&L.R. Bldg. 10A. Mr. WINDMULLER.

The historical development, administration, and operations of trade unions, with special emphasis on appraisal and understanding of the activities of the local union today. Federations, national unions, and local unions will be studied with respect to structure, government, leadership, and membership. The goals of unions will be analyzed, together with the methods organized labor uses to attain its aims, such as collective bargaining, political action, education, and union-sponsored welfare and benefit programs.

I.&L.R. 461. *SUPERVISION OF PERSONNEL*. (U,G) 2 hours credit. M T W Th F 8. I.&L.R. Bldg. 22. Mr. WINDMULLER.

Consideration of the supervisor's personnel and human relations responsibilities in planning, organizing, scheduling, and directing employee work effort; and the supervisor's relationships with higher supervision. The number of topics will be limited and will be tailored to meet the needs of people in the course. Coverage may include some of the following areas: the supervisor's responsibility for developing effective work teams, better communications, and sound human relations; the supervisor's relationship with the union; selecting, developing, motivating, and retaining an adequate work force; development of techniques for interviewing, correction and discipline, adjusting complaints and grievances, and aiding in the solution of employee problems. Opportunity for intensive discussion, analysis, and case study.

I.&L.R. 699. *SPECIAL STUDIES*. Directed research in special problems. Credit and hours to be arranged.

NONCREDIT SEMINARS AND WORKSHOPS

In the summer of 1954 the School is again offering a series of one-week noncredit seminars and workshops. These units are designed for "practitioners," and consequently each will give specific emphasis to an operational area of the field. The titles for these seminars are as follows: *Personnel Selection and Placement, Community Relations, In-Plant Communications, Conference Leadership, Health, Welfare, and Pension Plans, Annual Wage Issues*.

A number of conferences and institutes will also be conducted by the School. A special announcement covering the summer program of the School, including details of cost and content, may be obtained by writing to the office of Resident Instruction, New York State School of Industrial and Labor Relations, Cornell University.

LANGUAGES

The system of course numbering is the same for all languages offered by the Division. Courses 101 and 102 in a given language aim at bringing the student to a level of achievement sufficient to enable him to pass the proficiency examination and thus fulfill the language requirement for graduation. The courses are the equivalent of Courses 101 and 102 offered in the regular academic year.

Course 151 is designed to assist graduate students to prepare themselves for the reading examinations required by the Graduate School. This course is to be considered as a full-time program by the students, and the equivalent of six hours of undergraduate credit will be allowed. If fewer than eight students register for this course, the instruction given will be identical with that in 101.

All courses constitute a full academic program of six credit hours and consist of twenty hours of instruction each week at periods to be assigned. Registration for these courses will be closed when the capacity of the sections has been reached.

Frnch. 101. *FRENCH*. (U) 6 hours credit. Morrill. Mr. WEINGARTNER and staff.

Frnch. 102. *FRENCH*. (U) 6 hours credit. Prerequisite, French 101 or equivalent. Morrill. Mr. WEINGARTNER and staff.

Germ. 101. *GERMAN*. (U) 6 hours credit. Morrill. Mr. WHITE and staff.

Germ. 102. *GERMAN*. (U) 6 hours credit. Prerequisite, German 101 or equivalent. Morrill. Mr. WHITE and staff.

Germ. 151. *GERMAN*. (G) 6 hours credit. For graduate students acquiring reading proficiency. Morrill. Mr. WHITE and staff.

Span. 101. *SPANISH*. (U) 6 hours credit. Morrill. Mr. AGARD and staff.

Span. 102. *SPANISH*. (U) 6 hours credit. Prerequisite, Spanish 101 or equivalent. Morrill. Mr. AGARD and staff.

PHYSICAL SCIENCES AND MATHEMATICS

ASTRONOMY

Astro. 20. *THE PHYSICAL UNIVERSE*. (U,G) 2 hours credit. M T W Th F 10. Astronomy Bldg. 100. Mr. SHAW.

Survey of the known universe, including planets, comets, meteors, the sun, stars, our galaxy, and extragalactic systems. Telescopes and spectroscopy. Problems of space travel and the origin of celestial bodies. Observational work at Fuertes Observatory.

CHEMISTRY

*Chem. 105-106. *GENERAL CHEMISTRY*. (U) 6 hours credit. Lectures and recitations, M T W Th F 8-10, Baker 200. Laboratory, M T W Th F 10-1, Baker 150. Mr. PLANE and assistants.

For those students who intend to take more chemistry, this course serves as a prerequisite to the more advanced courses in chemistry. Secondary-school chemistry is not a prerequisite. The course may be elected by students who do not intend to take more chemistry. Emphasis on the more important chemical principles and facts, on the scientific method, and on the relation of chemistry to the other fields of knowledge and to everyday life. Text: Laubengayer, *General Chemistry*; Laubengayer, *Laboratory Manual and Problems in General Chemistry*. Laboratory fee, \$10.

*Chem. 201. *INTRODUCTORY QUALITATIVE ANALYSIS* (short course). (U,G) 4 hours credit. Prerequisite, general chemistry. Lectures, M T W Th F 8, Baker 7. Laboratory, three hours daily except Saturday between 9 and 1, Baker 50. Mr. SCHERAGA and assistant.

A study of the properties and reactions of the common elements and acid radicals and their detection in various solutions. Texts: Hogness and Johnson, *Ionic Equilibrium as Applied to Qualitative Analysis*; Heisig, *Semi-micro Qualitative Analysis*. Laboratory fee, \$15.

Chem. 205. *INTRODUCTORY QUALITATIVE ANALYSIS*. (U,G) 3 hours credit. Prerequisite, general chemistry. Chemistry 207 must be taken with 205. Lectures, M T W Th F 8. Recitations, T Th 9. Baker 7. Mr. SCHERAGA.

A study of the application of the theories of general chemistry to the systematic separation and detection of the common elements and acid radicals. Text: Hogness and Johnson, *Ionic Equilibrium as Applied to Qualitative Analysis*.

*Chem. 207. *INTRODUCTORY QUALITATIVE LABORATORY*. (U,G) 3 hours credit. Prerequisite, general chemistry. Must be taken with Chemistry 205. Laboratory, M W F 9-1 and T Th 10-1. Baker 50. Mr. SCHERAGA and assistant.

A study of the properties and reactions of the common elements and acid radicals and their detection in various solutions. Text: Heisig, *Semi-micro Qualitative Analysis*. Laboratory fee, \$15.

*Chem. 215. *INTRODUCTORY QUANTITATIVE ANALYSIS* (short course). (U,G) 4 hours credit. Prerequisite, qualitative analysis. Lectures, M T W Th F 8, Baker 177. Laboratory, three hours daily except Saturday between 9 and 1. Baker 252. Mr. COOKE and assistant.

A study of the fundamental principles of gravimetric and volumetric analysis, and the analysis of various substances by these methods. Texts: Kolthoff and Sandell, *Textbook of Quantitative Inorganic Analysis*; Nichols and Morse, *Laboratory Manual of Introductory Quantitative Analysis*. Laboratory fee, \$15.

Chem. 220. *INTRODUCTORY QUANTITATIVE ANALYSIS*. (U,G) 3 hours credit. Prerequisite, qualitative analysis. Chemistry 222 must be taken with 220. Lectures, M T W Th F 8. Recitations, T Th 9. Baker 177. Mr. COOKE.

A study of the fundamental principles of gravimetric and volumetric analysis with practice in stoichiometry. Text: Kolthoff and Sandell, *Textbook of Quantitative Inorganic Analysis*.

*Chem. 222. *INTRODUCTORY QUANTITATIVE LABORATORY*. (U,G) 3 hours credit. Prerequisite, qualitative analysis. Must be taken with Chemistry 220. Laboratory, M W F 9-1 and T Th 10-1. Baker 252. Mr. COOKE and assistant.

Laboratory practice in the preparation and standardization of various volumetric solutions and the analysis of a variety of substances by volumetric and gravimetric methods. Text: Nichols and Morse, *Laboratory Manual of Introductory Quantitative Analysis*. Laboratory fee, \$15.

Chem. 303. *ELEMENTARY ORGANIC CHEMISTRY*. (U,G) 4 hours credit. Prerequisite, general chemistry. Qualitative analysis is desirable but not required. Chemistry 305 must be taken with Chemistry 303. Lectures, M T W Th F 8-10. Baker 207. Mr. PHILLIPS.

A study of aliphatic and aromatic organic compounds, their occurrence, relations, and uses. Text: English and Cassidy, *Principles of Organic Chemistry*.

*Chem. 305. *ELEMENTARY ORGANIC LABORATORY*. (U,G) 2 hours credit. Prerequisite, general chemistry; qualitative analysis is desirable but not required. Must be taken with Chemistry 303. Laboratory, M T W Th F 10-12:30. Baker 250. Mr. PHILLIPS and assistant.

Laboratory experiments on the preparation and reactions of typical organic compounds. Text: Adams and Johnson, *Laboratory Experiments in Organic Chemistry*. Laboratory fee, \$15.

Chem. 307. *INTRODUCTORY ORGANIC CHEMISTRY*. (U,G) 3 hours credit. Prerequisite, general chemistry; qualitative analysis is desirable but not required. Lectures and written reviews, M T W Th F 8, and also at 9 during the first three weeks. Baker 207. Mr. PHILLIPS.

A study of the more important compounds of carbon, their occurrence, methods of preparation, relations, and uses. The work covered is equivalent only to the first half of the year course; students who wish a complete course should register for Chemistry 303 and 305. Text: English and Cassidy, *Principles of Organic Chemistry*.

*Chem. 311. *INTRODUCTORY ORGANIC LABORATORY*. (U,G) 3 hours credit. Prerequisite or parallel course, Chemistry 307. Laboratory experiments and oral reviews, M T W Th F 10-12:30. Baker 250. Mr. PHILLIPS and assistant.

The student prepares typical compounds of carbon and familiarizes himself with their properties, reactions, and relations. Text: Adams and Johnson, *Laboratory Experiments in Organic Chemistry*. Laboratory fee, \$20.

GEOLOGY

Geol. 901u. *SUMMER FIELD SCHOOL IN GEOLOGY*. (U,G) 6 hours credit. June 14-July 24. Mr. NEVIN.

Registration limited to men. For full information write to Department of Geology and Geography, McGraw Hall, Cornell University.

MATHEMATICS

Math. 162. *ANALYTIC GEOMETRY AND CALCULUS*. (U) 3 hours credit. Prerequisite, Mathematics 161 or the equivalent. M T W Th F S 10. White 103 and 121. Mr. OLUM and Mr. KAMEL.

Differentiation and integration of algebraic, trigonometric, logarithmic, and exponential functions with applications. Related topics, including polar coordinates, parametric equations, conic sections. Text: Kells, *Analytical Geometry and Calculus*, Chaps. xi-xvi and xix-xxi.

Math. 163. *ANALYTIC GEOMETRY AND CALCULUS*. (U) 3 hours credit. Prerequisite, Mathematics 162 or equivalent. M T W Th F S 10. White 101. Mr. HERZ.

Infinite series, solid analytic geometry, partial derivatives, multiple integrals. Text: Kells, *Analytic Geometry and Calculus*, Chaps. xxii-xxvi.

Math. 201. *DIFFERENTIAL EQUATIONS*. (U,G) 3 hours credit. Prerequisite, Mathematics 163 or the equivalent. M T W Th F S 11. White 103. Mr. OLUM.

A standard beginning course in ordinary differential equations.

Note: It is planned to give either Math. 201 or Math. 605 depending on the demand. If there is sufficient demand, both will be given.

Math. 221. *MATHEMATICS FOR SECONDARY SCHOOL TEACHERS*. (U,G) 3 hours credit. Prerequisite, Mathematics 162 or the consent of the teacher. M T W Th F S 9. White 121. Mr. KAMEL.

A selection of topics from higher mathematics will be considered with a view to giving a clearer understanding of some basic concepts underlying elementary mathematics.

Math. 322. *TOPICS IN MODERN ALGEBRA*. (U,G) 3 hours credit. Prerequisite, Mathematics 162 or the equivalent. M T W Th F S 11. White 101. Mr. HERZ.

Topics covered will include fields, linear equations and matrices, and some elementary group theory.

Math. 605. *NUMERICAL ANALYSIS*. (U,G) 3 hours credit. Prerequisite, Mathematics 201 or the equivalent. M T W Th F S 11. White 103. Mr. OLUM. (See note above under Math. 201.)

Processes useful in solving mathematical problems arising in engineering, physics, chemistry, etc. Interpolation, numerical integration, Fourier series, numerical solution of algebraic and transcendental equations and of ordinary and partial differential equations.

PHYSICS

*Phys. 103. *INTRODUCTORY EXPERIMENTAL PHYSICS*. (U,G) 3 hours credit. Demonstration lectures, M T W Th F S 8, Rockefeller A. Recitations, M T W Th F S 9, Rockefeller 103. Laboratory, M T W Th F 2-4, Rockefeller 220. Mr. MOORE.

Mechanics, heat, and sound. Text: Stewart and Gingrich, *Physics*. Laboratory fee, \$5. This course will be completed at the end of the first three weeks of the Summer Session.

*Phys. 104. *INTRODUCTORY EXPERIMENTAL PHYSICS*. (U,G) 3 hours credit. This course must be preceded by Physics 103 or by a study of mechanics in either high school or college physics. Demonstration lectures, M T W Th F S 8, Rockefeller A. Recitations, M T W Th F S 9, Rockefeller 103. Laboratory, M T W Th F 2-4, Rockefeller 220. Mr. MOORE.

Electricity and light. Text: Stewart and Gingrich, *Physics*. Laboratory fee, \$5. This course will start with the fourth week of the Summer Session and will be completed at the end of the Summer Session.

Phys. 115. *MECHANICS*. (U) 3 hours credit. A course for students of engineering with a deficiency in physics. M T W Th F 8 and M 2-4. Rockefeller 107. Mr. NEWHALL. Text: Sears-Zemansky, *College Physics, Part I*.

*Phys. 117. *ELECTRICITY AND MAGNETISM*. (U,G) 3 hours credit. Prerequisite, Physics 115 and Calculus or simultaneous registration in Mathematics 163. Lectures, T Th 9, Rockefeller A. Recitations, M T W Th F 8, Rockefeller 105. Laboratory, T Th F 2-4:30, Rockefeller Annex. Mr. TOMBOULIAN.

This course constitutes the third term of a four-term sequence in general physics required of students of mechanical, electrical, and chemical engineering and of engineering physics. The course includes fundamentals of electricity and magnetism of the sequence. Text: Sears, *Principles of Physics, II: Electricity and Magnetism*. Laboratory fee, \$5.

PSYCHOLOGY AND PHILOSOPHY

PSYCHOLOGY

Psych. 101. *INTRODUCTION TO PSYCHOLOGY*. (U) 2 hours credit. M T W Th F 9. Goldwin Smith C. Mr. BOGUSLAVSKY.

An introduction to the scientific study of behavior and experience, covering such topics as perception, motivation, emotion, learning, and the higher thought processes, personality and individual differences. This course is prerequisite to further work in the department.

Psych. 107. *PSYCHOLOGICAL BASIS OF SOCIAL BEHAVIOR*. (U) 2 hours credit. M T W Th F 9. Morrill 310. Mr. WALK.

Problems of social behavior will be approached by the study of individual psychological principles of motivation, learning, and personality development. After consideration of individual psychological principles, socialization, language, and group behavior, public opinion and propaganda will be studied.

Psych. 216. *PSYCHOLOGY OF LEARNING*. (U,G) 2 hours credit. M T W Th F 11. Morrill 310. Mr. WALK.

Selected topics as they relate to learning in ordinary social situations like the classroom, child training, and the job. Emphasis will be on human learning, and typical topics will include the influence of reward and punishment on learning, distribution of practice, retention, forgetting, transfer of training, and the broader implications of these topics.

Psych. 221. *MOTIVATION*. (U,G) 2 hours credit. M T W Th F 10. Morrill 340. Mr. BOGUSLAVSKY.

A study of the initiation, direction, and regulation of behavior. The problems of instinct, habit, incentive, and conflict are examined in the light of evidence from experimental, clinical, and social research.

Psych. 351. *PSYCHOLOGICAL TESTS*. (U,G) 3 hours credit. With consent of the instructor, this course may be taken without observations for two hours credit. M T W Th F 9; observational hours to be arranged. Morrill 340. Mr. STEINMETZ.

Concepts of intelligence; individual and group tests of intelligence; principles underlying their construction and interpretation; use of tests in schools, in the armed services, and in other fields. Lectures, reading, and observations of individual testing.

Psych. 413. *PSYCHOLOGY OF EXCEPTIONAL CHILDREN*. (G) (U by permission) 2 hours credit. M T W Th F 11. Morrill 340. Mr. STEINMETZ.

Designed to give a scientific understanding of children who deviate from the usual: the gifted, the feeble-minded, the delinquent, those having special abilities and disabilities, those having personality defects, and those having sensory and physical handicaps. Lectures, reading, and case studies. Students who have not had or are not now taking a course in mental measurements may be admitted only with the approval of the instructor.

PHILOSOPHY

Phil. 102. *PHILOSOPHICAL CLASSICS*. (U) 2 hours credit. This course is not open to students who have had advanced courses in philosophy. M T W Th F 12. Goldwin Smith 227. Mr. MALCOLM.

The student is offered selected readings in Hobbes, Locke, and Hume, with an emphasis upon the problems in ethical and social values. Texts: Hobbes, *The Citizen*; Burt, *English Philosophers*.

Phil. 333. *PHILOSOPHY OF PSYCHOLOGY*. (U,G) 2 hours credit. Open to students who are majoring in philosophy or psychology, to graduate students of philosophy or psychology, and to others with the consent of the instructor. M T W Th F 11. Goldwin Smith 227. Mr. MALCOLM.

A study of the central concepts in some one theory or movement in psychology, such as Freudian psychology, Gestalt psychology, behaviorism, parapsychology, or psychical research. What will be studied are the interpretations put upon the empirical findings of the workers in these movements.

Phil. 039. *INFORMAL STUDY*. (G) Credit and hours to be arranged. Open to graduate students with the consent of the instructor. Mr. MALCOLM.

SOCIAL SCIENCES

ECONOMICS

Econ. 101. *ELEMENTS OF ECONOMICS*. (U,G) 4 hours credit. M T W Th F 10-12. Goldwin Smith 242. Mr. GOODSTEIN.

A survey of the existing economic order in the United States, its more salient and basic characteristics, and its operations. This is the basic course in economics, and it or its equivalent is prerequisite to advanced courses in economics.

Econ. 203. *MONEY AND BANKING*. (U,G) 2 hours credit. Prerequisite, Economics 101 or the equivalent. M T W Th F 9. Goldwin Smith 256. Mr. LIVINGSTON.

A study of our monetary system and its functioning. The course will include a survey of United States monetary history, followed by a detailed analysis of the relationships between money, bank credit, interest rates, and prices. Governmental monetary controls, especially those of the Federal Reserve system, will be examined. There will be discussion of the problems of inflation, deflation, price stabilization, international finance, and similar issues.

Econ. 325. *PUBLIC REGULATION OF BUSINESS*. (U,G) 2 hours credit. Pre-requisite, Economics 101 or the equivalent. M T W Th F 11. Goldwin Smith 256. Mr. LIVINGSTON.

A study of the roles of competition, monopoly, and public policy in a private enterprise economy. There will be an examination of the American system of business organization, its price and production policies, and public policies of regulation, particularly antitrust policy.

Econ. 602. *AMERICAN ECONOMIC HISTORY*. (U,G) 2 hours credit. No pre-requisite. M T W Th F 10. Goldwin Smith 264. Mr. Dowd.

An examination and analysis of significant processes and relationships (institutional, technological, geographical) in the economic development of the United States from the colonial period to the present, with emphasis upon the last hundred years.

Econ. 607. *ECONOMIC POLICY*. (U,G) 2 hours credit. No prerequisite. M T W Th F 8. Goldwin Smith 264. Mr. Dowd.

A survey and analysis of several of the principal economic problems facing the United States and of policies designed to solve or mitigate those problems as advanced by various economic, political, or religious groups.

GOVERNMENT

Govt. 101. *AMERICAN NATIONAL GOVERNMENT*. (U,G) 2 hours credit. M T W Th F 9. Boardman 320. Mr. DOTSON.

A general introduction to American national government and politics. Emphasis will be placed upon the basic structure, functions, and powers of the federal government.

Govt. 102. *AMERICAN STATE AND LOCAL GOVERNMENT*. (U,G) 2 hours credit. M T W Th F 11. Boardman 320. Mr. DOTSON.

A general introduction to American state and local government. Primary emphasis will be placed upon the historical development, powers, organization, and practical working of the second element of the federation. Particular attention will be given to the formal and informal relationships between national and state and local governments.

HISTORY

Hist. 155. *THE MIDDLE PERIOD OF AMERICAN HISTORY, 1837-1877*. (U,G) 2 hours credit. M T W Th F 9. Boardman 122. Mr. BOGUE.

The conflict between nationalizing and sectional forces, economic problems, reform movements, commerce and manufacturing, the Civil War and Reconstruction.

Hist. 513. *THE NEW SOCIETY IN BRITAIN*. (U,G) 2 hours credit. M T W Th F 8. Boardman 122. Mr. MARCHAM.

A study of the political, social, and economic developments in Great Britain since the first World War, with particular attention to the effects of the growth of the welfare state and the nationalization of industry upon the traditional pattern of British society.

Hist. 516. *THE BRITISH PEOPLES IN WORLD AFFAIRS, MIDDLE 19TH CENTURY TO THE PRESENT*. (U,G) 2 hours credit. M T W Th F 10. Boardman 122. Mr. MARCHAM.

A study of the British colonies, of the dominions, and of Britain herself as participants in the political and economic development of Asia, Australasia, Africa, Europe, and North and South America during the past century.

Hist. 711. *THE TRANSMISSISSIPPI WEST IN AMERICAN HISTORY*. (U,G) 2 hours credit. M T W Th F 11. Boardman 122. Mr. BOGUE.

Indian policy, settlement agencies, immigration, territory and state making, railroad building, agricultural adaptation, land, credit and marketing problems and the West in national affairs.

SOCIOLOGY, ANTHROPOLOGY, AND RURAL SOCIOLOGY

Soc. 103. *MAN AND CULTURE: AN INTRODUCTION TO ANTHROPOLOGY*. (U,G) 2 hours credit. No prerequisite. M T W Th F 8. Morrill 240. Mr. SMITH.

A broad survey of the field of anthropology. Major emphasis on social anthropology. Topics include organization of cultural systems, culture change, and problems of cultural integration.

R. Soc. 137. *ADJUSTMENT IN THE MIDDLE AND LATER YEARS*. (U,G) 2 hours credit. M T W Th F 10. Warren 232. Mr. TAIETZ.

This course considers the adjustment in the middle and later years as a process of biological, psychological, and social change. Emphasis will be placed upon changes in role and status, marital and family relationships, living arrangements, and employment. The provisions, public and private, which have been developed to meet the aged person's economic, social, psychological, medical, recreational, educational, and housing needs will be described and evaluated.

R. Soc. 212. *RURAL SOCIOLOGY*. (U,G) 2 hours credit. M T W Th F 9. Warren 31. Mr. LARSON.

A study of rural life in the United States with emphasis on rural-urban relationships, major trends, and regional variations. Major areas considered are population, locality group and class structure, patterns of making a living, institutions and values. Special attention is given to analysis of the social structure of the community and the implications of this structure for the professional worker in extension, education, and other fields.

Soc. 412. *CULTURE AND PERSONALITY*. (U,G) 2 hours credit. No prerequisite. M T W Th F 10. Morrill 240. Mr. SMITH.

A study of facts and theories of personality development in our own culture and others, approached from the perspectives of psychology and of comparative cultural anthropology.

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